

Government of Madras

HOME (EDUCATION) DEPARTMENT

G.O. No. 728, 2nd June 1917

Madras Trades school

Recording the report on the working of the —.

INDEXED

BACK PAPERS.

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Government of Madras

HOME (EDUCATION) DEPARTMENT

G.O. No. 728, 2nd June 1917

Madras Trades school

Recording the report on the working of the —

Read—the following paper : —

Letter—from C. A. INNES, Esq., I.C.S., Director of Industries.
To—the Secretary to Government, Home (Education) Department.
Dated—Madras, the 19th May 1917.
No.—G. Cur. 124.

I have the honour to submit the report called for in G.O. No. 1092, dated 17th October 1916, regarding the working of the Government Trade school in Georgetown. I am afraid that the report has been rather delayed, but Mr. Coats, whom I had asked to examine the Mechanical Engineering section of the school, was called away in April to Satara on military duty and was able to conduct the examination only a few days ago. His report was received on the 15th instant.

2. It will be remembered that, as the result of discussions which had been going on continuously for five years and in which two strong committees consisting mainly of representatives of engineering and manufacturing firms had taken part, it was decided in the Government Order referred to above to open, as an experimental measure, in a rented building in Georgetown, classes in Mechanical Engineering and Plumbing. These two subjects were selected on the advice of Messrs. Madeley and Coats, Special Drainage Engineer and Municipal Engineer respectively to the Corporation of Madras, who informed Mr. Couchman that they were the two subjects in which trades classes were most urgently required. The central features of the scheme were that the instruction given should as far as possible be practical in character, that only working mechanics and plumbers should be admitted to the classes, and that the lecturers should be men actually engaged in the practice of the subject to be taught.

3. On receipt of the Government Order sanctioning the proposals, Mr. W. H. Lockley, Works Manager of the Beehive Foundry, and Mr. A. Hillier, Sanitary Engineer of Oakes & Co., Limited, were appointed lecturers in Mechanical Engineering and Plumbing, respectively. Syllabuses were drawn up by Mr. Fyfe in consultation with Messrs. Madeley and Coats, a prospectus was issued, and a circular letter was sent to all engineering firms, employees of labour and licensed plumbers in Madras asking for their co-operation. Criticisms were invited, and it was suggested that the mechanical engineering syllabus was too ambitious for a course of 40 lectures. The syllabus was accordingly revised.

4. Forty-seven applications were received for admission to the Mechanical Engineering class, and of these, twenty (the maximum number allowed for the class) were selected. The successful applicants were all apprentices or workmen in the different workshops in Madras. Five came from the Public Works Department Workshops, four from those of the Corporation, seven from the Beehive Foundry, two from the Crompton Engineering Company and one each from Messrs. Siemens Brothers and Messrs. P. Orr & Sons. There was less competition for admission to the Plumbing class, but the class filled, all applicants who were genuine plumbers or were apprenticed to plumbing firms being admitted, provided that they had sufficient general knowledge to profit by the course of instruction. Four of the successful candidates were licensed plumbers, and the rest came from Messrs. Oakes & Co., the Corporation Workshops, the Public Works Department Workshops, the Crompton Engineering Company and the Chengalvaraya Naicker's Technical Institute.

5. The classes were opened in the beginning of December, and the course of 40 lectures was brought, in both classes, to a conclusion in April. The following are the returns of attendance.

Class.	Number on roll.		Number making over 80 per cent attendance.	Average attendance for the session.
	At beginning.	At end.		
Mechanical Engineering	20	17	17	PER CENT. 95.4
Plumbing	20	19	18	94.5

It will be seen that the attendance was very good. Educationally the type of student attending the classes was better than had been expected. A few of the students in the Plumbing class had not sufficient knowledge of English to write it and to this extent they were hampered in assimilating the theoretical instruction, but as a whole the plumbers were older men and showed a keener sense of the value of the instruction provided than the students in the Mechanical Engineering class. In the Plumbing class particularly the nominal limit of one hour for the class was never adhered to. The lectures usually extended to two and even three hours and even then the students had literally to be turned out of the class room. Both lecturers showed great interest in their work.

6. At the end of the term the examinations were conducted by Mr. Madeley in Plumbing and Mr. Coats in Mechanical Engineering. I gave both examiners an absolutely free hand, and my thanks are due to them for the great trouble they took.

7. Mr. Madeley divided the examination into two parts, practical and theoretical. The practical examination included an examination of the practical work done during the term and of practical examinations held on the 21st and 24th April in lead joint wiping, mixing plumbers solder, screwing and jointing wrought iron pipes, dismantling and re-assembling of water metres, waste not taps, the use of taps and dies, and so on. The theoretical examination included an examination of the students' note-books for which marks were awarded and a written examination held on 18th April 1917. In each examination the students were divided into four classes:—

Class I	75 per cent and above	...	Very creditable.
" II	60—74 per cent	...	Creditable.
" III	50—59 per cent	...	Passable.
" IV	less than 50 per cent	...	Failed.

In the practical examination seven students passed in the first class, eight in the second class and four in the third class. All the 19 students presented for examination thus passed, and the result is very creditable both to the students and the teacher. Mr. Madeley's remarks in the practical work of the class are given below:—

"Generally speaking, the work was very well done, and in my opinion the whole of the students may be considered to have passed the first year's practical examination. The first three in class I were quite expert at all the work in which they were examined. The remainder all require further practice in joint wiping. A common fault which should be guarded against is the failure to make sure that in making a joint no obstruction is caused in the pipe, either by the two pieces joined together not fitting accurately, or through molten metal finding its way inside the pipe, or through the failure properly to remove the burr on the spigot end of the pipe. In work outside jointing, all the students obtained a high percentage of marks. All that they require is practice in order to set about their work in a more workman-like manner. This should readily be obtained before the end of the complete course."

In the theoretical examination the results were not so satisfactory, five were placed in the first class, two in the second, four in the third and eight in the fourth. "Generally speaking," says Mr. Madeley, "the work was done quite as well as can be expected from the short course of lectures which has been delivered. . . . A number of students gave poor definitions. This indicates a want of clear thinking which should be remedied." It is noteworthy that five of the students who were placed in class IV took down their notes and wrote their answers in Tamil. Three

of them were bracketed equal first in the practical examination, and it is obvious that their defective knowledge of English prevented them from understanding fully the lectures given by Mr. Hillier.

8. Mr. Coats allowed 75 per cent of the marks for the examination and 25 per cent for the terms work. For lack of lathes and other appliances, the practical work of the class had to be judged by the work done in the term. On the terms work all the students were marked very high, but the examination results were not so good. Sixty per cent of the marks allotted for the examination and terms work combined was taken as the minimum for a pass, and 12 out of the 17 who presented themselves for examination passed. Five of them however were very near the line. The results of this class were perhaps not so good as those of plumbing class. The reason probably is that the students were younger, and most of them being apprentices had less practical experience in the shops.

9. The cost of the classes up to the 1st May was as follows:—

Receipts.		RS.	A.	P.
Fees	...	120	0	0
Charges.				
1. Tools and plant, furniture and materials	...	6,339	11	11
2. Pay of lecturers and demonstrators	...	1,244	0	0
3. Pay of establishment (clerk and peon)	...	237	12	4
4. Rent	...	689	8	0
5. Electric supply	...	71	8	0
6. Office expenses	...	55	0	0
Total	...	8,637	8	3

10. On the whole I think that the classes have certainly justified themselves, and the result of the first year's work indicates clearly that there is a real need for classes of this kind in Madras. As they are run at present however they are expensive, and what is really wanted is a permanent Government Trade School in Madras with its own building and a staff of permanent lecturers. If Vernacular as well as English classes could be opened, so much the better, and another need is instruction in drawing. The Mechanical Engineering class also requires a larger outfit of lathes and appliances. A permanent school is undoubtedly the goal to aim at, but for the coming cold weather the experiment may be continued or rather extended on the same lines as at present, and I hope shortly to submit for the consideration of Government proposals for opening a number of new classes, including classes in drawing and electric wiring, and an apprentice class for the Perambur Workshops.

11. Mr. Fyfe took great interest in the classes and visited them constantly.

Order—No. 728, Home (Education), dated the 2nd June 1917.

Recorded.

(True Extract)

R. RAMACHANDRA RAO,
Secretary to Government.

To the Officer in charge of the Department of Industries.
Editors' Table.

Madas Trade School

Recording the report on the working
of the —

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191

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C. No. 2102A From the Office in Charge No. 124, dated the 19. 5. 1917
of the Dept. of Ind.

191

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No. 728, dated 2. 6. 191

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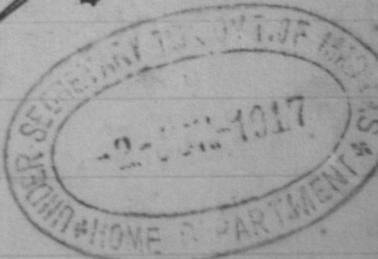
7 The Officer in charge
of the Dept. of Industries.

Recorded. ~~W. H. H. H. H.~~
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Recorded.

(True Extract)

R. RAMACHANDRA RAO,
Secretary to Government.

To the Officer in charge of the Department of Industries.

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