

17TH MAY 1883, Nos. 247, 248, MARINE.

GOVERNMENT OF MADRAS.

MARINE DEPARTMENT.

READ—the following papers :—

From the Honorable the Colonial Secretary, Colombo, to the Chief Secretary to Government, dated Colombo, 23rd September 1882, No. 48.

I am directed by the Governor of Ceylon to transmit to you the enclosed copy of a letter from the Master Attendant, Colombo, and I am to request that, with the permission of the Right Honorable the Governor of Madras in Council, you will be good enough to obtain the opinion of Mr. Pogson on the subject.

ENCLOSURE.

From J. DONNAN, Esq., Master Attendant, Colombo, to the Honorable the Colonial Secretary, Colombo, dated 18th September 1882, No. 162.

I have the honor to request that you will be pleased to communicate with the Madras Government with the view of obtaining the opinion of Mr. Pogson, the Astronomer, as to the time signals transmitted to the Colombo Telegraph Office being sufficiently accurate for the purpose of rating chronometers and giving mean time to the shipping in Colombo Harbour; and if not, whether it could be conveniently arranged for accurate signals being transmitted from the Madras Observatory at least twice a week for this purpose. At present I give time to the shipping by chronometers rated once a week by morning observations of the sun by artificial horizon, but it would no doubt ensure greater accuracy if mean time could be obtained from Madras and the difference of longitude in time between Madras and Colombo applied to it in giving the mean time signal for Colombo. By this means steamers homeward bound, touching at Madras and Colombo, and obtaining Madras time in both places, with an interval of four or in some cases five days between the time signals, would be able to rate their chronometers sufficiently exact for carrying them on to Aden or Suez.

From N. R. POGSON, Esq., C.I.E., Government Astronomer, to the Chief Secretary to Government, dated Madras, 10th May 1883.

I have the honor to express my regret that the enclosed reference should have remained so long unanswered, the chief reason being that until recently I could only have acknowledged my inability to render the Master Attendant at Colombo the desired aid in regard to time signals.

2. From the commencement of the current official year, however, the telegraphic communication between Madras and Colombo having been made direct, *i.e.*, without repetition at Pámban, I learn from the Superintendent of Government Telegraphs, Madras, that the daily Time Roll from the Observatory here, which distributes Madras time to all Government Telegraph Stations in India, reaches Colombo Telegraph Office just as certainly as it does any station in India. This being the case, the Master Attendant of Colombo can, by taking a chronometer to the Telegraph Office and listening for the last beat of the time roll, have its error from Madras time pretty certainly within a second, daily at 4 P.M., and this would, I should think, be considerably more accurate as well as far less laborious than rating a chronometer once a week by observations of the sun.

3. I am, however, of opinion that the present system of transmitting Madras time is capable of great improvement, and that not only for Colombo, but far more for Bombay, Calcutta and all the chief parts of India, a better and more convenient system should be introduced, and this could, I believe, be done with very trifling outlay at starting and with an actual saving of labor to the Telegraph Department itself. The present practice is, to clear all the lines about five minutes before 4 P.M., for a daily time roll of three minutes' duration. An Assistant in the Observatory commences tapping slowly, at 3-57 P.M., by the standard electrical mean time clock. This tapping, which is repeated automatically at certain first-class Telegraph Offices, merely calls attention to the circumstance that 4 P.M. is near at hand, when the signallers at such offices commence similar hand rolls to the minor offices, so as to set all simultaneously on the look out for the cessation of the roll, which occurs precisely at 4 P.M. Wherever the Observatory signals are received direct, I believe that any one able to count a chronometer and estimate fractions of a second may thus obtain true Madras time within half and probably within a quarter of a second; but elsewhere, when the roll has to be repeated by hand, though near enough for all ordinary purposes of life, I consider that for chronometer rating or anything requiring scientific accuracy, such signals are very inadequate and uncertain to several seconds. The tedium and monotony of a three minutes' roll of warning is enough to weary both signaller and observer to such an extent as to render its termination far less definite than if it had been given for a much shorter time, as for instance half a minute; but the method is not mine, and I have hitherto merely complied with the directions conveyed to me departmentally, as being considered most simple and least liable to failure by the Telegraph signallers.

4. The change I would suggest is the adoption of ordinary galvanometers for the tapping roll. It is well known that the breaking of a circuit is far more reliable than the sending of a current, and so, if the needle of a galvanometer were kept deflected at each office by means of a weak current, say for about fifteen seconds before any hour of the day considered most suitable, the normal clock of the Madras Observatory could automatically break such currents and cause the galvanometer needles to return to the perpendicular, simultaneously at every station in India. Such is, I believe, the simple method adopted for time regulation by Telegraph in England, and should my suggestion meet with the approval of Government, I am quite sure that our able Madras Superintendent of Telegraphs, Mr. P. V. Luke, C.I.E., would most willingly co-operate with me in at once carrying the proposed change into effect.

5. As the public are not as a rule admitted inside the signalling rooms of Government Telegraph Offices, it would be desirable, if possible, to have some larger and more conspicuous galvanometers, or other equally simple contrivances, worked outside the offices, especially at seaports, where the signals are of so much importance for ascertaining the errors and rates of chronometers.

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(True Extract.)

C. G. MASTER,
Chief Secretary.

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„ Superintendent of Telegraphs, Madras, through
the Public Works Department.

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Copy to the Honorable the Colonial Secretary, Colombo.

C. G. MASTER,
Chief Secretary.

Exd. E. Fernandez.

Govt. of (1883) Madras.

MARINE.

Issued

Recd.

Encl.

G.O., &c., 17th May 1883,
Nos. 247, 248.

No. 1533 w af. 1st June 83.

MAY.

*Forwarded to the
Supt. of Tel. Madras - on
28/5/83*

Supt. of Tel. M. D.

Time Signals.

Forwarding to the Colonial Secretary, Colombo, letter from the Government Astronomer, Madras, regarding the Madras time signals transmitted to the Colombo Telegraph Office, and requesting the Superintendent of Telegraphs, Madras, to consider the suggestions made by Mr. Pogson for the improvement of the present system of transmitting Madras time.

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Govt. of (1883) Madras.

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Recd.

Encl.

G.O., &c., 17th May 1883,
Nos. 247, 248.

No 1533 Raf-1st June 1883

MAY.

*Forwarded to the
Supt of Tel. Madras on
18 Feb.
Supt of Tel. Madras*

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for Chief Secretary.

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Chief Secretary.

Exd. E. Fernandez.

J.W.C. No 4525

No 1533 Wd 1st June 83

Govt. of (1883) Madras.

MARINE.

B

Forwarded to
The Supt of Telegraphs
Madras Division

D.S.C

Cu

Cu
31/5

Issued

Recd.

30/5/83

Encl.

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2 copies sent by 13. 6/83

W. H. H. H.

D. H.

Receipt Recd.

D. H.
2/6

Supt of Tel. M. Du

100%