

Eighteenth Annual Kepu

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Bombay Sm«**Buaiiisuii**(

EIGHTEENTH ANNUAL REPORT OF THE
SMOKE-NUISANCES COMMISSION FOR
YEAR 1930-31.

1. This report covers the period from 1st April 1930 to 31st March 1931. The Commission consisted of the following members :•

President.

- (1) Mr. W. Dillon, I.C.S., Acting Collector of Bombay (from 1st April 1930 to 24th October 1930). *Ex-officio.*
Mr. J. W. Smyth, I.C.S., Collector of Bombay (from 25th October 1930 to 31st March 1931).

Members.

- (2) Mr. R. McMurray ~]
- (3) Mr. P. B. Advani, M.Sc. Nominated- by Government.
- (4) Mr. E. G. Cameron J
- (5) Mr. H.H. Lakin (from 1st April 1930 to 17th February 1931). Elected by the M U , Association, Bombay.
Vacant from 18th February 1931 to 31st March 1931.
- (6) Mr. W. A. Sutherland.
- (7) Mr. A. Geddis (from 1st April 1930 to 23rd October 1930). Elected by the Chamber of Commerce, Bombay.
Vacant from 24th October 1930 to 20th January 1931.
Mr. R. L. Ferard (from 21st January 1931 to 31st March 1931).

SUB-COMMITTEE FOR KARACHI.

President.

- (1) Mr. J. R. Hood, I.C.S., Collector of Karachi (from 1st April 1930 to 20th November 1930).
Vacant from 21st November 1930 to 23rd November 1930.
Mr. J. Monteath, I.C.S., Collector of Karachi (from 24th November 1930 to 31st March 1931).

Members.

{, Mr. K. W. Edwards (from 1st April 1930 to 13th May 1930).
Vacant from 13th May 1930 to 9th June 1930. Nominated by Government.
Mr. W. C. Echlin (from 10th June 1930 to 31st March 1931).

- (3) Khan Bahadur A. H. Mama .. Elected by the Karachi Municipality,
(4) Mr. R. J. Rainc .. Elected by the Factory owners, Karachi.

SUB-COMMITTEE FOR AHMEDABAD,

President.

- (1) Mr. E. G. Taylor, I.C.S., Collector of Ahmedabad .. *Ex-officio.*

Members.

- (2) Mr. M. T. Adalja, Executive Engineer, Ahmedabad Division .. *Ex-officio.*
(3) Colonel Sir B. H. Nanavaty, CLE. .. Elected by the Ahmedabad Municipality.
(4) Sheth Sakarlal Balabhai .. Elected by the Mill owners* Association, Ahmedabad.

2. During the year four meetings of the Commission were held at Bombay, four of the sub-committee were held at Karachi and three of the sub-committee were held at Ahmedabad.

The Commission was satisfied with the work done by the staff and with the co-operation received from owners and engineers of mills and factories.

3. In Bombay the services of one Inspector were wholly devoted to smoke-nuisances inspection throughout the year.

At Karachi the smoke-nuisances inspection is carried out by the Inspector in addition to his boiler inspection work and his work on tour.

At Ahmedabad the smoke-nuisances inspection is carried out by the Inspector stationed there in addition to his local and occasional district boiler inspection work.

4. The following table summarises and compares the work of the year and that of the preceding year in the three areas :—

		Observations of chimneys.	Visits to Factories.	Tests of appliances.
Bombay	1930-31	5,989	1,690	47
Do.	1929-30	6,017	1,415	59
Karachi	1930-31	203	32G	6
Do.	1929-30	130	19	<i>Nil.</i>
Ahmedabad	1930-31	1,049	889	<i>Nil.</i>
Do.	1929-30	984	596	28
Total	f1930-31	7,241	2,905	63
	< (,1929-30	7,131	2,030	87

5. In Bombay in comparison with the figures for the last year the total number of observations and of tests of appliances shows a slight decrease, while that of visits to factories shows an appreciable increase. This decrease has been more than made up by the visits paid and the instructions given to prevent smoke-nuisance. Flues and chimneys of small factories were dealt with in conjunction with the Bombay Municipality : this has formed a considerable part of the Commission's activities in recent years.

Many new factories are being added to the register. During the year the factories so added number 54 and include sugar refineries, soap, metal casting and lead smelting factories. The latter factories give a considerable amount of trouble when smoke-nuisance is concerned, since a large number of them is situated in the residential and business centre of the City. The actual density of the smoke emitted from the chimneys of such factories is scarcely above scale 4, but without adequate means to draw away the smoke from inside the premises in such a crowded city like Bombay the health of the public living close by must be impaired. The earning capacity of these factories during the year as a result of keen competition has been small and does not warrant the Department insisting on a large expenditure, but in future it may be possible to obviate this by insisting on metal casting factories going to some distance outside the congested business area.

A few more mills have been converted from coal to oil fuel. The competitive prices of coal and oil are such that there is little saving by using oil in the smaller concerns, whilst the advantage in keeping steam is considerable.

The G.I.P. Railway have extended their electric services outside of Bombay during the year. The B.B. & C.I. Railway have recently

opened the new Central Station ; now all the steam trains start from this station instead of from Colaba which has been entirely closed down since January 1st, 1931. This makes a considerable difference to the smoke-nuisance in the Fort area.

The average number of ships in the Alexandra, Victoria and Prince's Docks fell considerably during the early part of the year, but in the latter half it has been much better with the result that the total average for the year is almost the same as that of the previous year.

The industrial development of the City is steadily increasing, although the unsettled state of the country has had a very bad effect on small factory owners.

It is satisfactory to record the cordial co-operation of the heads of engineering departments, public bodies, shipping agencies and works using small boilers with the Inspector in the abatement of smoke-nuisances. By this means drivers and firemen are dealt with departmentally by their superiors when found to be careless in causing unnecessary smoke.

6. In Karachi, the total number of observations and of visits to factories shows a considerable increase over the figures of the preceding year. In this connection it is satisfactory to note that the Inspector has been able to devote some more time for smoke-nuisances duties than in previous years. This was due to the smaller pressure of boiler inspection work in the districts consequent on the diminution of the Lloyd Barrage Works and on the grouping of inspections of mofussil boilers.

7. At Ahmedabad the total number of observations and of visits to factories increased in comparison with the figures for the last year, while no tests of appliances were carried out. The ever increasing work of boiler inspection especially under the heads of repairs, steam pipes, separators, superheaters, etc., necessitated a slight curtailment of the time for the smoke-nuisances work during the year. Endeavour has, however, been made to give proper attention to this work, as will be apparent from the increase in the number of observations and of visits to factories.

The year's work shows an improvement over that of the preceding year, and this is due to the extra vigilance shown by the Inspector in personally interviewing the owners of chimneys and holding conferences with them. This method was adopted in pursuance of the wishes of the Sub-Committee and was found more efficient than issuing written notices and warnings. Attention was also paid to the nuisance caused by the railway locomotives especially when running between Sabarmati and Ahmedabad by corresponding with the District Loco Superintendent whenever the emission of black smoke from such locomotives was noticed. As a result this smoke nuisance has been greatly reduced.

There were 14 new boilers imported and registered in Ahmedabad City during the year of which one was spare and the rest were either for new concerns or were installed to meet the extra power requirement. Of the three new mills which were under construction one has started work and

the remaining two are nearing completion and will shortly begin working. Three new mills are about to be erected. One mill which had been closed down for some years and from which the boilers and machinery had been removed, has been fully re-equipped and restarted working. About 16 mills did night work during the year.

8. The emission of smoke is recorded according to the following table :—

Scale No. 1	..	..	..	No smoke.
„ No. 2				Light grey.
„ No. 3				Grey.
„ No. 4				Very dark grey.
„ No. 5				Black.
No. 6				Dense black.

For the purpose of smoke-nuisances inspection only scales Nos. 4, 5 and 6 are important. In Bombay and other areas to which the Act has been applied the emission of dense black smoke (scale 6) is prohibited. Scales Nos. 5 and 4 are related to scale No. 6 as follows :—One minute of scale No. 5 (black smoke) is taken as equal to '55 minute of scale No. 6 (dense black) and one minute of scale No. 4 (very dark grey) is taken as equal to '37 minute of scale No. 6.

On this basis, the average of smoke of the three highest densities was equal to '477 minute per hour of dense black smoke for each of the 2,600 observations of the chimneys for one hour in Bombay during the year, as compared with "51 minute per hour for the preceding year.

For the 172 observations of the chimneys for one hour at Karachi during the year the average emission was equal to 1*207 minutes per hour of dense black smoke as against 1*493 minutes per hour in the preceding year.

For the 1,049 observations of the chimneys for one hour at Ahmedabad the average emission was equal to 1*4 minutes per hour as against 2'23 minutes per hour in the preceding year.

9. There were at the close of the year 827 stationary chimneys in Bombay Island and Kurla, 65 in Karachi and 120 in Ahmedabad on the register of the Commission. During the year 4 new chimneys were brought on the register at Ahmedabad and none at Karachi. Besides the registered stationary chimneys there are many others connected to boilers of railways and road locomotives, road rollers and portable engines and, in the seaport towns, to steam ships, dredgers, tugs and launches. It is the Inspector's duty to see that the limits of emission allowed by the rules are not exceeded, and for this purpose he takes observations of the smoke emitted from these various chimneys indiscriminately, and also for the purpose of comparison and record he takes a series of observations of one hour each of emissions from stationary chimneys, from which an average emission for each month and subsequently an average for the year is compiled. This average is taken as representative of the total smoke emissions for the area throughout the year.

10. The following table shows the yearly average emission of smoke for Bombay, Karachi and Ahmedabad, since the statistics have been maintained :—

BOMBAY.					Scales Nos, 0, 5 and 4 reduced to scale No. G, i.e., dense black— Minutes per hour
Year.					
1013	February				11·6
1913	March				6·5
1914	„	..	..	..	1·86
1915	„	..	..	..	1·474
1916	„	..	..	..	1·432
1917	„	..	..	..	1·235
1918	„	..	..	..	1·203
1919	„	..	..	..	1·144
1920	„	..	..	..	1·254
1921	„	..	..	..	1·406
1922	„	..	..	..	1·82
1923	„	..	..	..	1·55
1924	„	..	..	..	1·949
1925	„	..	..	..	1·416
1926	„	..	..	..	1·116
1927	„	..	..	..	1·26
1928	„	..	..	..	1·104
1929	„	..	..	..	·61
1930	„	..	..	..	·51
1931	„	..	..	..	477
KARACHI.					
1922	(October 1921 to March 1922)				4·538
1923	March				221
1924	„				1·804
1925	„				2·37
1926	„				4·57
1927	„				2·765
1928	„				2·432
1929	„				1·705
1930	„				1·493
1931	„				1·207
AHMEDABAD.					
1924	(November 1923 to March 1924)	..			6·56
1925	March				3·95
1926	„	..	..	..	3·5
1927	„	..	..	..	2·68
1928	„	..	..	..	2·63
1929	„	..	..	..	9·00
1930	„	..	..	..	2·23
1931	„	..	..	..	1·4

11. The following notices and warnings were issued during the year:—

		Notices.	Intima- tions.	Statutory warnings.
Bombay	"Factories	417	19	<i>Nil</i>
	Locomotives	66	9	2
	Steam lorries	<i>Nil</i>	<i>Nil</i>	<i>Nil</i> .
	Road rollers, cranes and single boilers.	12	<i>Nil</i> .	<i>Nil</i>
	Steam ships	203	15	<i>Nil</i> .
	^Tugs and launches	11	<i>Nil</i> .	<i>Nil</i>
Karachi	'Factories	8	<i>Nil</i> .	1
	Locomotives	6	<i>Nil</i>	<i>Nil</i>
	Steam ships	12	2	<i>Nil</i>
Ahmedabad	"Factories	29	<i>Nil</i>	<i>Nil</i>
	Locomotives	5	<i>Nil</i> .	<i>Nil</i> .
	Road rollers, cranes and single boilers.	<i>Nil</i> .	<i>Nil</i> .	<i>Nil</i>

12. Twenty-two complaints were received from the public in Bombay during the year and measures were taken in each case to obviate the nuisance as far as possible.

Six complaints were received from the public in Karachi and steps were taken to minimise the nuisance. In one case the owner was asked to remove the furnace entirely, and this was done.

No complaint was received from the public in Ahmedabad during the year.

13. In Bombay the owner of a smithshop and coach factory was prosecuted for failing to erect a chimney within the prescribed time-limit. The case had not been disposed of at the end of the year.

No prosecution was instituted for any breach of the Act either at Karachi or Ahmedabad.

14. The draft rules under the Bombay Smoke-nuisances (Amendment) Act, 1929, regarding the erection, alteration, addition or re-erection of a furnace, flue or chimney were sanctioned by Government during the year. Some little difficulty will be experienced for the time being in getting factory owners to submit the plans of flues and chimneys. But it is satisfactory to note that in nearly all the new plans submitted to the Commission for approval, the owners have practically complied with the rules with regard to the alterations and additions. Similar difficulty is also likely to be felt in the matter of the under-sized chimneys that were first erected in several mills in the mofussil where the Act is in operation. The trade especially at Ahmedabad has gradually increased to such an extent that extensions have been necessary, and consequently the flue and chimney areas have been found too small for the larger plant. This is being obviated as far as possible by induced

Several of the engineering firms' representatives who are responsible for various erections of boiler plants, have consulted the Commission with regard to the new rules, and have expressed their desire to assist in making them a success.

15. Mr. J. Pratt was in charge of the office of the Chief Inspector of Steam Boilers and Smoke-nuisances throughout the year.

Mr. A. W. Marks was in charge of the smoke-nuisances inspection work in Bombay till 9th February 1931 when he was relieved by Mr. S. H. Thaker who was in charge of this work during the remainder of the year.

Mr. S. Gazdar was in charge of the smoke-nuisances inspection work at Karachi throughout the year.

Mr. J. Cubbon was in charge of the smoke-nuisances inspection work at Ahmedabad throughout the year.

Bombay, 20th May 1931.

J. W. SMYTH,

Collector and President,
Bombay Smoke-nuisances Commission.