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1923-24



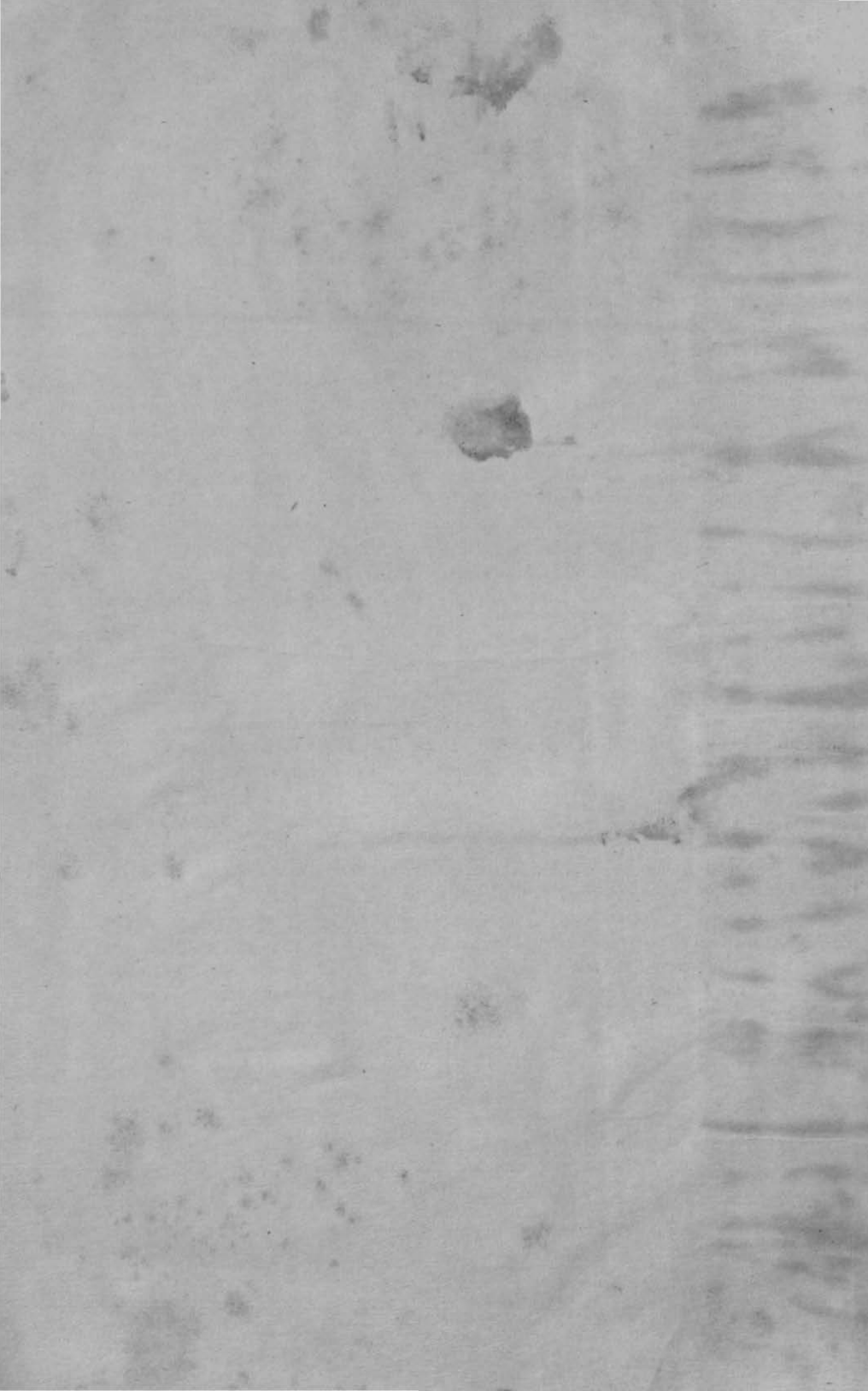
Administration Report
of the
Indian Stores Department
for the year
1923-24

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CALCUTTA GOVERNMENT OF INDIA.
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CHAPTER I.

Introduction.

The Indian Stores Department entered the second financial year of its existence in April 1923. The previous fifteen months of its infancy was mainly a period of preparation, though it was able to carry out an appreciable volume of actual purchase and inspection work by the absorption *en bloc* of the self-contained organisations which had been constituted some years previously under the control of other departments for the purchase of textile goods and for the testing and inspection of engineering materials and various other descriptions of stores. The value of the purchases effected, which consisted wholly of textile materials and goods, amounted during this period to Rs. 224 lakhs, of which approximately Rs. 164 $\frac{3}{4}$ lakhs were expended during the financial year 1922-23, 92% of this latter sum representing the value of materials produced in India. The inspection work, which was of scientific and a rigid character, comprised during the year 1922-23 the inspection of stores and materials to the value of Rs. 142 $\frac{3}{4}$ lakhs approximately and the carrying out of over 4,000 laboratory tests and analyses by the staff of the Superintendent of Local Manufactures and Government Test House at Alipore, Calcutta, besides the inspection of over 1,00,000 tons of materials at the Metallurgical Inspectorate at Jamshedpur. The preparatory work dealt with consisted in the main of the formulation and submission to the Government of India of a scheme of organisation; of an investigation, so far as the skeleton staff and the means at the disposal of the department permitted, of the existing and potential resources of India in the matter of stores and materials; and of the institution of a procedure to regulate the business of the Department. Further progress in its development was retarded in consequence initially of the unsatisfactory condition of the finances of India, and later in view of the decision of the Government of India to bring this phase of their activities within the scope of the investigations of the Retrenchment Committee presided over by Lord Incheape. The recommendations made by that Committee were decidedly unfavourable to any immediate expansion of the scope of the Department. Indeed, they threatened its very existence, for the conditions postulated by the Commission rendered it problematical whether, in the then not improbable event of their non-fulfilment, any useful purpose would be served by the continuance of the Department as a separate purchasing organisation. The Incheape Report was published at the close of the financial year 1922-23, and thus the prospects of the Department at the commencement of the year under report (1923-24) were far from encouraging. Fortunately for the Department itself, and for the larger interests of economy and the industrial development of the country, the Government of India did not accept the view expressed by the Retrenchment Committee, and they decided to proceed with the formation and development of the Department as the financial and other relevant circumstances permitted.

2. The continuance of the financial stringency precluded the provision of the funds necessary to permit of any large measure of development during

the year, but sufficient funds were available to enable the Department to make a commencement with the purchase of engineering stores; to organise the administrative staff for the direction and control of the Inspection Branch of the Department; to effect a reform of the existing testing and inspection arrangements in Bengal by the constitution of separate agencies for the carrying out of inspection work on the one hand and of testing and analytical work in the laboratories of the Government Test House at Alipore on the other, and to establish a separate agency at headquarters for the acquisition and dissemination of information in respect of sources of supply, markets, prices, etc. These measures resulted in an appreciable expansion of the Department's activities, particularly in the Inspection Branch. The work of the Metallurgical Inspectorate shows an increase of about 60%: that done by the Controller of Inspection, Calcutta Circle, exceeded by 40% the volume carried out by the Superintendent of Local Manufactures in the preceding year, while there was a growth of about 16% in the testing and analytical work of the Test House. The extent of the purchase work, judged by the aggregate value of the stores purchased which amounted to Rs. 167 lakhs, does not, indeed, show any appreciable advance over the transactions of the preceding twelve months, notwithstanding the accretion of about half a crore of rupees worth of engineering plant and materials and miscellaneous stores. This, however, does not indicate that the Indian textiles market—the only class of stores purchased by the Department during the previous year—was not resorted to the fullest possible extent. The decrease is attributable partly to keener competition among suppliers and partly to a diminution of the requirements of the Army in India owing to the accumulation of stocks in the past and to the reduction of the effective strength of the Army.

3. A disappointing feature was the reluctance manifested by the Central Departments, with two notable exceptions, the Army Department and the Public Works Department at Delhi, to utilise the agency of the Indian Stores Department in connection with their purchases to a larger extent than hitherto. On the other hand, the attitude displayed towards the Department by some of the Provincial Governments, which it will be remembered were not included in the Government of India's scheme of stores purchase, was decidedly encouraging. Two of the larger of these Governments have already entrusted an appreciable volume of purchase and inspection work to the Department, and there is every ground for hope that this arrangement will be perpetuated and extended to other authorities outside the scheme.

4. Substantial progress was made in the direction of ascertaining indigenous sources of supply in respect of various classes of materials, and much useful work was done by the scrutiny of indents on the Director-General, India Store Department, and by other means in placing indenting Departments in touch with Indian manufacturers and importers. On the whole, a definite advance was made towards the goal which the Government of India have set before themselves in their stores purchase policy. The resolution carried in the Legislative Assembly in February 1924 recommending the adoption of a system of purchase on the basis of rupee tender must, if acted

upon by the Government of India, have a profound effect on the scope and character of the Stores Department. The question is one of far-reaching importance, not only in respect of its probable repercussion in the industrial and commercial life of the country but also in its effect in the sphere of administrative finance and efficiency. It needs therefore the most careful and exhaustive consideration. The Government of India have, however, made a notable advance in the direction desired by authorising purchase in India, from the branches and agencies of foreign manufacturers established in the country, of engineering plant and machinery and component parts thereof, whether stocks are held in the country or not, and this measure has enabled the Department to purchase at economical prices in India a considerable quantity of engineering plant and machinery which otherwise would have been indented for from England.

CHAPTER II.

Organisation.

5. A scheme of development for the Department during the year 1923-24 was submitted to the Government of India towards the latter part of the preceding financial year. This scheme provided for the constitution of a purchasing organisation for engineering and miscellaneous stores at headquarters; for the establishment of purchasing branches at Calcutta, Bombay and Cawnpore; for the organisation of the controlling staff of the Inspection Branch at headquarters; for the separation of inspection work as distinguished from tests and analyses from the office of the Superintendent of Local Manufactures and Government Test House, Alipore, and the constitution of a circle of Inspection at Calcutta for the discharge of the former duties; for the formation of Inspection circles in Bombay, Cawnpore and Madras; for the setting up of an organisation for the acquisition and dissemination of information regarding sources of supply, markets, prices, etc., and lastly for increases in the personnel of certain of the existing organisations and the revision of the pay of the establishments of the Government Test House and the Metallurgical Inspectorate. Some of these measures had already received the sanction of the Government of India, but had been held in abeyance pending the examination of the whole question of the constitution of the Department by the Inchape Committee. The scheme was estimated to cost approximately Rs. 12 lakhs during the year 1923-24. The financial pressure which existed at the time did not, however, permit the Government of India to provide funds to that extent. A sum of approximately Rs. 2 lakhs was the most that could be made available for this purpose, and this amount merely sufficed to permit of the carrying out of the following measures:—

- (a) the constitution of the controlling staff of the Inspection Branch at headquarters;
- (b) the establishment of a branch at headquarters for the purchase of engineering and miscellaneous stores;
- (c) the establishment of the Intelligence Branch at headquarters for the scrutiny of indents by Departments on the Director-General

of Stores, India Store Department, London, and for the acquisition and dissemination of information regarding sources of supply. etc. ;

- (d) the separation of inspection work from the office of the Superintendent of Local Manufactures and Government Test House and the constitution of a circle of Inspection at Calcutta for the discharge of this work ; and
- (e) small increases of the staff of certain of the existing organisations.

Towards the latter end of the year a portion of the savings which had accrued in certain directions in the anticipated expenditure of the Department were utilized to set up the nucleus of an Inspection agency at Karachi, where the need for such an establishment had arisen in consequence of the purchases effected by the Department on behalf of various Departments of the central and provincial Governments. At the close of the year the organisation of the Department was as follows, the italicised matter indicating the additional staff which had been appointed during the course of the year :—

HEADQUARTERS.

Gazetted staff.

- The Chief Controller of Stores.
- The Director of Inspection.
- The Director of Purchase and Intelligence.
- The Deputy Director of Purchase (Textiles).
- The Deputy Director of Purchase (Engineering).*
- The Assistant Chief Controller of Stores.
- The Assistant Director of Inspection.*
- The Assistant Director of Purchase (Textiles).
- The Assistant Director of Intelligence.*

Clerical and menial staff.

- 2 Superintendents.
- 1 Superintendent.*
- 13 Assistants.
- 8 Assistants.*
- 4 Stenographers.
- 16 Clerks
- 19 Clerks*
- 1 Head Draftsman.*
- 3 Draftsmen*
- 1 Tracer.*
- 16 Menials.
- 11 Menials.*

METALLURGICAL INSPECTORATE.

- The Metallurgical Inspector.
 5 Assistant Metallurgical Inspectors.
 1 Chemist.
 3 Chemical Laboratory Assistants.
 2 Inspections Assistants.
 2 *Examiners*.
 7 Clerks.
 1 *Clerk*.
 3 Bearers.
 7 Peons.

GOVERNMENT TEST HOUSE.

- The Superintendent.
 1 Chemist.
 1 *Physicist (in lieu of Deputy Superintendent)*.
 1 *Assistant Chemist*.
 1 Assistant Engineer.
 2 Physical Laboratory Assistants.
 6 Chemical Laboratory Assistants.
 4 *Chemical Laboratory Assistants*.
 1 Foreman.
 11 Clerks and Stenographer.
 1 Storekeeper.
 1 Mistry.
 2 Fitters.
 5 Laboratory Bearers.
 2 *Laboratory Bearers*.
 16 Menials.

CALCUTTA INSPECTION CIRCLE.

- The Controller of Inspection*.
 7 Inspectors.
 5 *Examiners*.
 14 *Clerks and Stenographer*.
 1 *Draftsman*.
 1 *Tracer*.
 19 *Menials*.

KARACHI INSPECTION AGENCY.

- 1 *Inspector in charge*.
 1 *Examiner*.
 2 *Clerks*.
 2 *Menials*.

6. The principles which were referred to in paragraph 7 of the previous report were observed in filling all the gazetted appointments and those appointments in the subordinate grades of a technical or special character. All the new appointments of these classes were advertised in the newspapers, and selections were made from among the candidates who had offered themselves in response to these advertisements. The claims of Indians to appointments in the Department were given full and careful consideration, and persons of that nationality were selected whenever possible. Of the nine officers appointed to gazetted posts during the year four were Indians. Indians were also selected for all but two of the subordinate technical posts.

7. Apart from these additions to the staff, few changes in the personnel occurred during the year. The Chief Controller of Stores proceeded on leave for three months and ten days in October 1923. During this period Lt.-Col. K. M. Kirkhope, Director of Inspection, was appointed to officiate as Chief Controller in addition to carrying on his own duties. On his return in August 1923 from the leave on which he had proceeded in the preceding April, Mr. R. Mather, the Metallurgical Inspector, was placed on deputation to act as technical adviser to the Tariff Board in connection with the enquiry made by that body into the condition of the iron and steel industry of India. During his absence the duties of the post of Metallurgical Inspector were discharged by Mr. N. Garret Smith, the senior Assistant Metallurgical Inspector, in addition to his own duties. The Superintendship of the Government Test House fell vacant in November 1923 owing to the enforced departure on leave consequent on ill health of Mr. H. A. F. Musgrave. Mr. N. Brodie, the Chemist in the Test House, was appointed to act as Superintendent in addition to his own duties. Four other officers were on leave for portions of the year, and one officer, Mr. Mohammad Khairud Deane, the Assistant Engineer of the Test House, resigned his appointment and was succeeded by Mr. A. N. Choudhury. During the last five months of the year an officer, Mr. P. J. Gahan, was employed at headquarters on special duty.

8. The only other matters in connection with the staff which need be noticed are the grant of the status of gazetted officers to the Inspectors of Stores, and the treatment of all members of the gazetted staff of the Department, irrespective of their scales of pay, as officers of the first grade for the purpose of the travelling allowance regulations. The emoluments of the Inspectors had been appreciably increased during the preceding year: the position held by them is one of considerable importance and responsibility, and it was considered that the raising of the status of their appointments would provide a further inducement to candidates of the right type to offer themselves for the posts.

CHAPTER III.

Functions of the Department.

9. The probable scope and functions of the Department were outlined in Chapter III, paragraph 8, of the previous report. The question as to the extent to which the other Central Departments of Government and the minor

Local Governments should utilise the services of the Stores Department for the purchase and inspection of stores required by these authorities was the subject of consideration by the Government of India, and the year drew to its close without any decision having been reached. This is no place for a polemical discussion on this subject ; but it may be confidently stated that the Central Departments of the Government could, with advantage, have utilised the agency of the Stores Department for the purchase of a substantially larger proportion of their requirements than was actually entrusted to the Department. The Department is staffed by officers who had previously acquired experience in this field and who possess wider opportunities than officers of other Departments for acquainting themselves with actual market conditions and also by officers who possess a wide technical knowledge and experience of many of the classes of stores in ordinary demand. The value of this combination has proved itself in the practical test to which it was put in connection with the purchase of stores, a large proportion of which was of a highly complicated and specialised type, for the Military Engineering Services, the Public Works Department, Delhi, and the Governments of Bombay and the Punjab, and indications are not lacking that the Stores Department was of considerable practical assistance to these authorities. The work done by the Stores Department was not confined merely to the calling for tenders, the placing of orders and the inspection of materials, etc., purchased ; but entailed in many instances the technical scrutiny of schemes with the object of ascertaining the most efficient type of plant, machinery and material required for the particular purpose as well as the preparation of drawings and specifications of the class of stores needed. The results which have actually been achieved in the spheres in which the Department has operated give ground for belief that it would have been to the advantage of the Central Departments of the Government to have made greater use of the facilities which the Indian Stores Department is in a position to afford. This question is, however, still under the consideration of the Government of India, and it may be possible in the next report to record a more definite advance in the direction of the centralisation of purchases in the hands of the Stores Department. The arrangement under which the Army Department, which has since the constitution of the Stores Department utilised it for the purchase of the bulk of the requirements of the Army in respect of textile goods, entrusted the purchase of stores required by the Military Engineering Services to the Department was initially limited to a period of one year, but the question of its continuance as a permanent measure is now under consideration. The work done for the Public Works Department, Delhi, was entirely in connection with the project for the construction of the Imperial Capital. That carried out for the Government of Bombay was principally in connection with the Lloyd Barrage Project, though the Department was employed to effect purchases for certain other Departments of the Local Government. The work undertaken for the Government of the Punjab was mainly connected with the Sutlej Valley Project. An appreciable quantity of work was, however, also done for other Departments in the Province, notably the Industries Department.

10. A matter of considerable interest and importance to the Department was raised by the Resolution which was carried in the Legislative Assembly towards the close of the year recommending that the existing system of stores

purchase should be replaced by a system of purchase by rupee tenders for delivery in India. The adoption of a rupee tender system in India will necessarily entail a considerable alteration of the scope and functions of the Department besides necessitating a modification of the character of its organisation. The question is one which affects the industrial and commercial interests of the country very deeply; but in order to ensure that the benefits which may be expected to accrue by the reform advocated are not counteracted by deficiencies in the executive machinery, it is essential that the organisations in India upon whom the responsibility for purchase would devolve should be properly organised and equipped and that efficient arrangements should be made for the inspection throughout the various processes of manufacture of articles which it would be necessary to import from other countries. For many years to come India must of necessity rely on foreign countries for the supply of a large proportion of the requirements of the State, more especially in respect of engineering plant and machinery, which are just the classes of stores which need careful inspection at all stages of manufacture in order to ensure that the State is receiving the best value for its outlay. The whole matter bristles with difficulties, as was explained by certain members of the Government during the debate in the Assembly; and, although it may not be impossible to devise an arrangement which, while advancing the commercial and industrial welfare of the country, will not impair the efficiency of the administration and not add to the burden of the general tax-payer, yet the matter is one which needs to be subjected to a very close and exhaustive examination. The whole question is engaging the serious attention of the Government of India, who will no doubt make a pronouncement of the policy which they propose to adopt at the earliest possible moment. In anticipation, however, of the approval of the Secretary of State for India of an amendment of the Rules for the supply of articles for the public service, they authorised in many instances the purchase from branches and agencies in India of foreign manufacturing firms of stores of non-Indian manufacture irrespective of the ordinary condition imposed by the Stores Rules that imported stores may be purchased in India only if they are in the country at the time of the order. This authorisation enabled the Stores Department to purchase during the year a substantial quantity of plant and machinery which would ordinarily have been obtained through the agency of the London Stores Department, and it has thus served to some extent to meet the public demand that India should undertake her own purchase work.

Activities of the Department.

11. During the period covered by the previous report the activities of the Department on the purchase side were confined to textile goods. The establishment of the Engineering Purchase Branch, to which reference has been made in Chapter II, paragraph 5, enabled the Department to initiate the arrangements for the purchase of engineering plant, machinery and materials, hardware and miscellaneous stores, such as oils, paints and varnishes, etc. This Branch started its operations in June 1923, and in the ten months of its existence during the year under review the purchases effected by it amounted in all to Rs. 50,15,656 in value. These purchases consisted of various description of stores, ranging from simple articles like wire nails and bolts and nuts to complex and

highly specialised types of plant and machinery, such as complete electrical power plants, locomotives, rail coaches and trailers, bogies and bogie tank wagons, concrete mixers, pile driving plants, etc. Whenever possible, consistently with sound business principles, articles of Indian manufacture were obtained; but owing to the backward state of the engineering industry in India most of the plant and machinery purchased was necessarily of foreign manufacture: hence the percentage of expenditure on indigenous products in this Branch of the Department's activities was comparatively small. In the Textiles Branch, the aggregate value of the purchases effected during the year was substantially less than in the preceding 12 months, Rs. 1,17,08,745 against Rs. 1,64,78,305. This large reduction is not due to the purchase through the agency of the London Stores Department by authorities who utilise the services of the Stores Department of stores of descriptions which could have been obtained in India consistently with the provisions of the Stores Rules. The decrease is entirely due to the shortening of prices as the result of keener competition among suppliers, and also to a decrease of the demands from the Army owing to the existence of accumulated stocks and to the reduction of the requirements of the Army in consequence of the diminution of its effective strength. In dealing with the demands received by the Department the products of India continued to be obtained to the largest possible extent, as is evidenced by the fact that of the total value of the purchase effected 89 per cent. represented the value of goods manufactured in the country. In addition to purchasing textiles goods for Government Departments of India, the Stores Department was entrusted with the execution of an order for 1,000,800 grain bags required by the Government of the Union of South Africa. These bags were purchased from a firm in India and were entirely of indigenous manufacture. The price paid for them amounted to Rs. 6,05,484. It is interesting to record that but for the existence of the Indian Stores Department it is not improbable that the whole or part of the order would have been placed outside India.

12. The direct competitive tender system continued to be followed in effecting purchases, and the experience of the past year has amply corroborated the soundness of the conclusion previously formed that it is the most suitable system for a public department operating on a large scale such as the Stores Department does. An innovation which was introduced during the course of the year was to publish a statement weekly in the Indian Trade Journal giving particulars of the orders placed. This practice has been criticised in some quarters as unfair to the trade; but it is a practice which is followed by various public bodies at Home and possesses, from the point of view of the general tax-payer, certain obvious advantages.

The revised agreement with Messrs. Birkmyre Bros. of Calcutta, under which that firm acts on a commission basis as agents of Government for the purchase of certain classes of articles made of jute which are ordinarily manufactured in the Calcutta Jute Mills, was continued throughout the year. It has, however, been decided to bring this class of purchase into line with the other purchases effected by the Department as soon as a purchasing agency has been established at Calcutta—a measure which is expected to be given effect to during the ensuing financial year.

That the business of the Department continued to be widely distributed is borne out by the annexed series of diagrams. The absorption by firms in Bengal of the bulk of the jute and engineering purchases is obviously due to the fact that that presidency is the main producer of jute and articles made therefrom, and has reached a more advanced stage than the other presidencies and provinces in respect of the manufacture and importation of engineering stores and materials. The portion of the diagram relating to cotton and woollen textiles furnishes an instructive commentary on the value of the opinion referred to in paragraph 11 of the previous report that centralised buying tends to the creation of selling monopolies. During the year 1922-23, Delhi, the Madras Presidency, the United Provinces, and the Bombay Presidency absorbed between them in this order the bulk of the business carried out in cotton materials; and Madras, Bengal, the United Provinces and the Punjab the bulk of that done in woollens. During the year under review, the Madras Presidency headed the list by a very large extent in so far as cottons were concerned with the United Provinces, Delhi, and the Bombay Presidency occupying comparatively low second, third and fourth places. In respect of woollen materials, the United Provinces stood first with the Madras Presidency and Delhi a fairly close second and third and with the Bengal Presidency and the Punjab falling far behind. Subjoined is a complete comparison of the transactions during the two years in these classes of materials. From this many other remarkable variations in the course of the business of the Department will be apparent:—

Cotton.

				1922-23.	1923-24.
				Rs.	Rs.
	Total	..	..	68,37,069	47,74,108
Delhi	..	..	..	16,64,828	3,25,890
Madras	..	..	..	16,37,487	33,40,185
The United Provinces	..	..	..	15,56,751	5,80,881
Bombay	..	..	..	12,93,290	3,13,702
Punjab	..	..	..	4,56,561	1,74,723
Bengal	..	..	..	1,62,173	21,460
C. P.	..	..	..	65,979	17,267

Woollens.

				1922-23.	1923-24.
				Rs.	Rs.
	Total	..	..	49,58,279	52,88,158
Madras	..	..	..	13,34,268	12,04,000
Bengal	..	..	..	11,74,057	6,82,021
U. P.	..	..	..	11,40,121	13,04,242
Punjab	..	..	..	9,21,290	6,51,460
Bombay	..	..	..	1,87,556	3,55,256
B. & O.	..	..	..	1,58,137	26,775
Delhi	..	..	..	42,550	10,64,404
Jaipur	..	..	..	300	..

GOVERNMENT OF INDIA
INDIAN STORES DEPARTMENT

Net value, in rupees, of stores purchased in each Province during the year

1923-1924.

Cotton materials TOTAL RS. 47,74,108	NIL	BIHAR & ORISSA.			
	17,267	CENTRAL PROVINCES.			
	21,460	BENGAL.			
	1,74,723	PUNJAB.			
	3,13,702	BOMBAY.			
	3,25,890	DELHI.			
	5,80,881	UNITED PROVINCES.			
					33,40,185
					MADRAS INCLUDING MYSORE STATE.

Wool materials TOTAL RS. 52,88,158	NIL	CENTRAL PROVINCES.			
	26,775	BIHAR & ORISSA.			
	3,55,256	BOMBAY.			
	6,51,460	PUNJAB.			
	6,82,021	BENGAL.			
		10,64,404	DELHI.		
					12,04,000
					MADRAS INCLUDING MYSORE STATE.
					13,04,242
					UNITED PROVINCES.

Jute materials TOTAL RS. 14,37,854	NIL	CENTRAL PROVINCES.			
	NIL	BIHAR & ORISSA.			
	416	MADRAS INCLUDING MYSORE STATE.			
	22,481	PUNJAB.			
	31,855	UNITED PROVINCES.			
	52,221	DELHI.			
	57,199	BOMBAY.			
					12,73,682
					BENGAL.

Engineering TOTAL RS. 48,89,196	NIL	CENTRAL PROVINCES.			
	NIL	MADRAS INCLUDING MYSORE STATE.			
	27,794	UNITED PROVINCES.			
	38,300	BIHAR & ORISSA.			
	2,41,410	PUNJAB.			
		9,72,805	DELHI.		
					12,06,317
					BOMBAY.
					24,02,570
					BENGAL.

Total stores purchased TOTAL RS. 1,63,89,316	17,267	CENTRAL PROVINCES.				
	65,075	BIHAR & ORISSA.				
		10,90,074	PUNJAB.			
						19,32,474
						BOMBAY.
						19,44,772
					UNITED PROVINCES.	
					24,15,320	
					DELHI.	
					43,79,733	
					BENGAL	
					45,44,601	
					MADRAS INCLUDING MYSORE STATE	

INDIA

THE VALUE IN RUPEES OF THE

UNPAID BALANCE
AS AT THE END OF THE YEAR

AMOUNT IN RUPEES

1953-54

1952-53

1951-52

1950-51

1949-50

1948-49

AMOUNT IN POUNDS

1953-54

1952-53

1951-52

1950-51

1949-50

1948-49

1947-48

TOTAL IN RUPEES

TOTAL IN POUNDS

These actual results conclusively dispose of the theory in question in its applicability at least to a Department which conducts its business upon the principles which had been established and which will continue to be followed in the Stores Department.

13. The record of the purchasing activities of the Department may be closed with a list of the more important purchases effected during the year, which may be found interesting by various sections of the public :—

Textiles Branch.

	Rs.
Drill (grey, bleached & dyed)	24,34,387
Blankets and Rugs	23,14,279
Socks worsted	10,23,846
Pugri cloth	8,85,328
Gunny bags	6,28,647
Great coat cloth	5,74,890
Putties	4,97,902
Durries	3,86,509
Gunny cloth	3,50,574
Dak bags	3,07,779
Bleached long cloth	2,59,332
Sheets	2,11,430
Vests, woollen	1,57,704
Ropes and cordages	1,43,000
Tents and components	1,22,831
Serge drab mixture	1,21,000
Paulins	89,425
Towels	76,686
Caps, comforters	73,594
Cardigan jackets	66,140
Flannelette	61,995
Felt	50,663

Engineering Branch.

Permanent Way Materials—

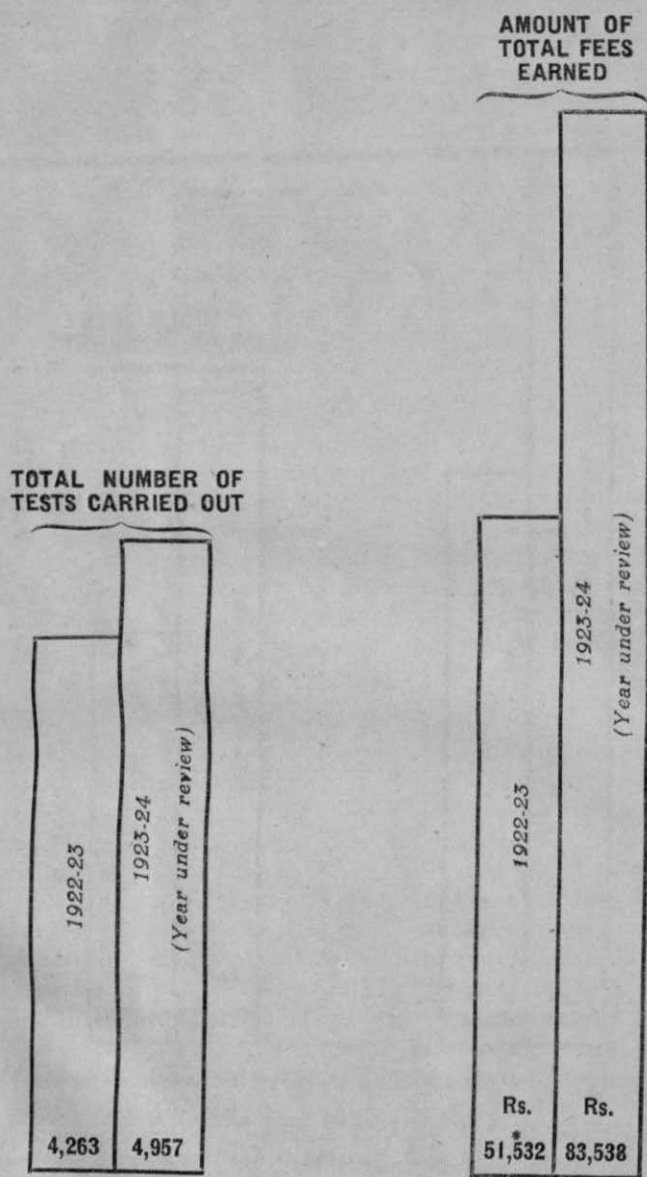
Locomotive & Rolling Stock	3,66,833
Sleepers	2,19,375
Miscellaneous plant	3,37,642
Steel structures	1,67,622
Cement	45,000
Plant and Materials for Electrical Installations	10,32,060
Cast Iron piping	77,236
Creccote	8,27,748

14. The appointment of the Director and Assistant Director of Inspection enabled the Department to place on a proper basis the organisation and procedure of the Inspection Branch. The duties of this Branch are not confined merely to the carrying out of inspections, tests and analyses, but are of a varied and multifarious character, comprising, among other things, the preparation of specifications and drawings, where necessary; the watching of deliveries on orders with a view to ensuring prompt compliance therewith; and the inspection of the works of firms applying for enrolment on the lists of approved contractors with a view to determining their capacity and ability to handle satisfactorily the class of stores which they claim to be able to manufacture. Generally, the Branch acts as the technical advisers of the Department as to the suitability of all descriptions of stores for the purposes for which they are to be used—a duty which at times involves a complete and careful technical scrutiny of the schemes in connection with which demands for stores are made. Obviously therefore the Branch is of very material assistance in ensuring efficient and economical purchases—in fact it is essential for the attainment of that object.

The constitution of a separate and self-contained agency for the carrying out of inspections, as distinct from tests and analyses, in Calcutta and its neighbourhood, to which reference has already been made in Chapter II, has fully justified the belief in which this measure was advocated, that it would enable the work of inspection on the one hand and of tests and analyses on the other to be discharged more efficiently than had been practicable under the previous arrangement. The duties differ fundamentally in character, and, as events have proved, the most satisfactory way of arranging for their efficient performance is to provide for their being carried out by entirely separate and distinct organisations.

15. There was a marked increase of the volume of the purely inspection, testing and analytical work devolving on the Department, as will be observed from the accompanying diagrams. This was due to the freer utilisation of the services of the Department for inspection work by other Departments; to the entrustment to the Department of the purchase of engineering and miscellaneous stores, plant and materials; to the increased output at the Tata Iron & Steel Co.'s works, resulting from an expansion of those works, and to the utilisation of the agency of the Department for the inspection of sheet bars made by the Tata Iron & Steel Co. for the Tinsplate Co. (India), Ltd., of steel wire and wire nails manufactured by the Indian Steel Wire Products Co., Ltd., and of copper wire and cables made by the Indian Cable Co., Ltd. The work included, apart from the manufactures of the Tata Iron & Steel Co., Ltd., the Indian Steel Products Co., Ltd., and the Indian Cable Co., Ltd., the inspection throughout the processes of manufacture in cases in which manufacture was carried out in India, of a varied assortment of stores comprising, as in the case of the purchases effected by the Department, both articles of the simplest character and also highly specialised types of plant, machinery, etc., such as locomotives, railway wagons, rail coaches, oil engines, complete power plants, concrete mixers, dragline excavators etc. etc.

GOVERNMENT TEST HOUSE, ALIPORE, CALCUTTA.
COMPARATIVE STATEMENT OF WORK AND REVENUE



* The figure of Rs. 1,28,061 shown in the last report included a sum of Rs. 76,529 on account of inspection fees, which has now been shown under the Inspection Circle, Calcutta.

The diagrams represent fees earned and not those actually adjusted during the year.

GOVERNMENT OF WEST BENGAL, CALCUTTA

COMPASSIBLE STATEMENT OF WORK AND REVENUE

AMOUNT OF
TOTAL
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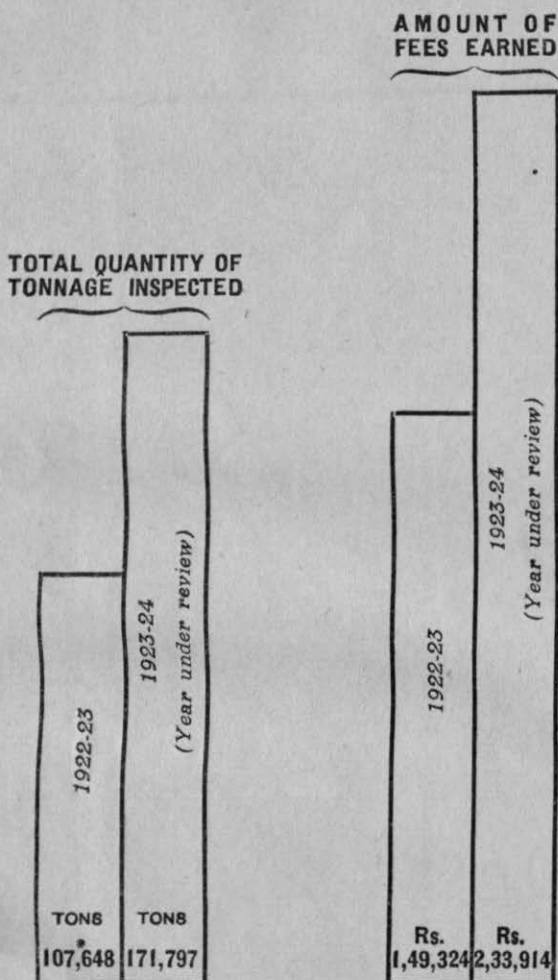
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METALLURGICAL INSPECTORATE, JAMSHEDPUR.

COMPARATIVE STATEMENT OF WORK AND REVENUE



* The difference between this figure and the figure (1,17,777) shown in the last report is due to the fact that for the sake of uniformity the nominal weight of accepted material has been given in respect of structural steel, etc. inspected by the Inspectorate instead of the ingot weight shown in the last report.

The diagrams represent fees earned and not those actually adjusted during the year.

VALUE OF WORK INSPECTED

CALCUTTA INSPECTION CIRCLE

Rs. 1,42,79,333

1922-23

(Fees earned Rs. 76,529)

Rs. 2,10,88,041

1923-24
(Year under review)

(Fees earned Rs. 1,28,105)

Rs. 2,18,580

Fees earned Rs. 2,186

KARACHI INSPECTION AGENCY
(OPENED JANUARY 1924.)

VALUE FOR TAX IS \$10.00

AMOUNT PAID

K. EARL BENTON, JR.
COUNTY CLERK

RECEIVED

1952

16. The inspection of the textiles materials purchased for the Army in India continued to be carried out, as hitherto, by the Army Inspectorate; but the Stores Department was enabled by the appointment to its staff during the course of the year of persons possessing a scientific and practical knowledge of textiles to arrange for the proper inspection of materials of this class purchased through its agency for other Departments of the Government.

17. The laboratories of the Test House and the Metallurgical Inspectorate were kept very busy throughout the year. Not only was there an increase in the number of tests, etc., carried out, but many tests and investigations of a description not attempted before were undertaken. At the Metallurgical Inspectorate the investigatory work covered such varied materials as, for example, special alloy steels, ordinary steels (rails, axles, tyres tubes and tools), wrought iron (draw bar hooks), cast iron (motor-rotor and rolls), copper (fire box plates), tin (metal and dross), brass (tubes and spindles) and bronze (bearings). At the laboratories of the Test House, the new work comprised textile testing, pipe testing, cock and valve testing, fatigue and notched bar tests for metals, fan testing, road metal testing and testing of railway couplings and draw bars by impact. A number of samples of electrical cables were also tested, but in the manufacturers' own laboratories. In addition, several descriptions of coal were tested for the Coal Dust Committee. These tests were of a special character, concerned with the solubility of the coals in pyridene and the percentages of volatile matter given off at different temperatures, from samples of varying degrees of fineness and under other varying conditions. Some interesting results were obtained. A full report was made regarding the paints in use in Ordnance establishments and proposals, which have in general been accepted by the Army authorities concerned, were made for the reduction of these to a very small proportion of the original number in order to simplify the arrangements for supply and to secure economy. A beginning was made with practical tests of different paints and valuable results are expected ultimately to be obtained from these tests. The construction of a new laboratory for the exclusive testing of oils of all descriptions and allied substances, such as grease and petrol, equipped with a number of new types of apparatus, permitted an appreciable development to be effected in this branch of testing. The subject of lubrication is an important one, and it is most desirable that more attention should be devoted to the proper testing of oils than has been paid to it in the past. The generally accepted standards for lubricants are based on results obtained with American oils and it is necessary that an exhaustive series of tests should be carried out on oils produced in India and Burma, which differ chemically from those of America, in order to determine what effect these differences have in practice and the precise value of Indian oils as lubricants. This matter will be borne prominently in mind, and proposals will be made at the earliest possible moment for the purchase of the machinery and the employment of the additional staff which will be necessary in order to permit of the matter receiving that attention which its importance demands.

With the arrival of certain apparatus for which orders have been placed it will be possible next year to undertake the photometric and other tests of

electric lamps and the testing of vacuum brake apparatus, and also to carry out additional descriptions of tests of textiles materials. During the year a tentative suggestion was made that taximeters for use in one of the cities should be tested by the Department. The question was gone into fully and detailed proposals were made to the authority concerned. It was also arranged that the officer selected for the new post of Physicist in the Test House should undergo a course in taximeter testing at the National Physical Laboratory, Teddington, but up to the present no action has been taken towards utilising the services of the Department in the direction suggested.

18. The preparation of specifications of stores forms an important part of the work of the Department. During the year a number of specifications were prepared by the Inspection Branch at headquarters many of which were of a complicated character. The particulars of the more important of these are given below :—

Mobilization hutting.

Steelwork for the roofing of the Legislative Buildings, at the new Capital.
Meter gauge steam motor with goods truck, etc., for the Sutlej Valley Project.

Oils and Paints full range.

Concrete mixing plant for the Sutlej Valley Project.

Stone breaker plant and screens for the Nalagarh Quarries, Sutlej Valley Project.

Electric Generating plant for the Nalagarh Quarries Power House.

Electric Generating plant for the Ferozepore Power House.

Power plant for the New Power Station at the new Capital, Delhi.

Dragline excavators—light, medium and heavy type.

Oil engine driven alternator for Sambhar Lake.

The specifications for paints drawn up by the Government Test House during the regime of the Indian Munitions Board were revised and completely re-written by the staff of the Test House. The average standard of paints obtainable in the Indian market is not so high as is desirable, and it will make for substantial economy if Government purchasers were to confine themselves to obtaining only those brands which comply with these specifications. The specifications for oils were partially revised. A further revision of these specifications is, as already indicated, very desirable, and the matter is being kept in view.

19. The other activities of the Department—and these are not the least important—are connected with the collection of information as to sources of supply, market conditions, prices, etc., with the scrutiny of indents placed on the Director-General, India Store Department, London, by other Departments with a view to obviating demands on the United Kingdom and other countries for stores which are obtainable in India in consonance with the Rules for the supply of articles for the public service; with the investigation of the possibilities of the manufacture of articles not hitherto attempted

in the country and the improvement of existing standards; and with the registration of firms as "approved contractors" to the Department. A considerable amount of information was collected during the year in regard to markets, etc., and for facility of reference has been compiled in the form of a directory. Advantage was taken of every means possible to acquire information as to the prices ruling in the Indian markets in respect of various classes of articles which are in ordinary demand by Departments of Government, and a considerable volume of interesting and valuable information has been obtained in respect of the prices current in the markets of the United Kingdom through the medium of the contracts placed by the Director-General, India Store Department, a copy of each of which is forwarded immediately to the Stores Department, and by means of telegraphic and other enquiries, whenever necessary, of the Director-General. The collection of this information has enabled the Department itself to place much business in the country which might otherwise have gone abroad, and has also enabled it to make a more effective scrutiny of the indents placed on the London Stores Department by other Departments than was possible during the earlier period of its existence, the result of which was to add still further to the volume and extent of the purchases made in India by Government. Enquiries were made either as to the possibility of manufacture in India, or as to the improvement of the standard of the existing manufactures, in respect of many and varied classes of Stores, such as, acids of various descriptions; axle boxes; balances (spring); bearing plates; belting (link leather); bitumastic solution; bitulac A. B. C. solution; bolts (barrel, door, tower); brushes (paint, sash tool, shaving, varnish, wire); combs; cloth (American white); cloth (broad, blue); couplings (screw and universal); dahs; enamelware; fasteners (belt and web equipment); flax (canvas); felt (tarred); forks; gauges (enamelled iron); gold leaf; hoes; hoop iron fasteners; knives (clasp and farriers); ladles (melting); lamp glasses (segmental of different colours and for hand signal lamps); lenses for lamps; naphthalene; nitrate of silver; nuts (hexagon, $\frac{1}{4}$ "); paints of various descriptions; pencils (carpenters); polish (metal); posts (wrought iron); rubber-sheet for valves and joints; serge (navy blue 54"); spoons; varnish of various sorts; washers (iron); wedges (wrought iron); wickings (kerosene oil) and wire webbing. In several cases the results proved satisfactory, and indentors were asked to give the Indian manufacturers an opportunity of tendering for their requirements in future. The names of 125 firms in India were placed on the list of approved contractors during the year after such steps, such as the inspection of the premises or works of the firms, as were considered necessary, had been taken to ensure the enrolment only of firms of proved standing and capacity.

20. The preceding paragraphs indicate that the activities of the Department were many and varied and that there was a marked development of its operations during the year. The objects kept consistently in view were to conduct the work of the Department in accordance with sound business principles and to place in, or help to divert to, the markets of India as much of the business of Government as the application of these principles and the provisions of the stores purchase rules rendered possible. The results obtained indicate that a measure of success was secured in the attainment of these objects.

CHAPTER IV.

Finance.

21. As indicated in the previous report, the Department has been constituted with the idea that it should be self-supporting, and to permit of this charges are imposed for the services rendered by it to other Departments of the Government (Imperial or Provincial) as well as to public bodies and private firms and individuals. The charge for purchase alone or for inspection alone, other than those carried out at the Test House or Metallurgical Inspectorate, continued to be made at a fixed rate of 1 per cent. on the value of the stores purchased or inspected. In cases where both purchase and inspection were undertaken, the rate levied was 2 per cent. on the value of the stores. Inspections, tests and analyses carried out at the Metallurgical Inspectorate or at the Test House are charged for at special rates, which were entirely revised during the course of the year as the rates previously in force were found to be inadequate and otherwise unsuited to present day conditions. These charges continue to constitute the main source of the income of the Department; but a certain amount of revenue was derived by the levy of a small charge for tender forms and for forms of application for appointment to the gazetted posts in the Department. The charge for the former class of the document is imposed not with the object of increasing the income of the Department, although these forms which are often accompanied by specifications and drawings cost in the time of highly paid officers engaged on their preparation substantial expenditure to the State, but in order to limit the issue of tender forms and specifications to firms actually in a position to tender for the requirements satisfactorily. The charge for the forms of application is levied to meet the expenses connected with the advertisement of the appointments which are appreciable.

22. Naturally, the increase of the volume of the purchase and inspection work devolving on the Department was reflected in its revenue, which exceeded that of the previous twelve months by Rs. 86,973. About thirty per cent. of this increase was, however, due to the revision of the scale of charges leviable at the Test House and Metallurgical Inspectorate and to the imposition of the charges for tender and application forms. *Per contra*, there was a substantial increase of the expenditure of the Department, amounting to Rs. 3,03,543. This was partly the natural result of the expansion of the staff, but a large portion of the increase is of a class which is non-recurring, such as the value of land and of plant, machinery, etc. Excluding these items, the expenditure during the year exceeded the recurring expenditure of the preceding year by Rs. 1,96,245—an amount which is still appreciably in excess of the additional revenue earned. With the means that were at the disposal of the Department it would have been possible to have undertaken a substantial amount of additional work if this had been forthcoming, in which case the financial results would have been more satisfactory; but, all things considered, these results cannot be regarded as unsatisfactory. A loss on working is the usual and natural concomitant of new undertakings during the earlier period of their operation. The results indicate that the charge at present fixed for purchase and inspection is in itself both reasonable and sufficient in

conjunction with other sources of revenue, to enable the Department to equate its income with its expenditure. The matter will, however, be examined after further experience has been acquired, and such revision of the rates as may be found necessary will then be undertaken, unless in the meantime it be decided by the Government of India to give the services of the Department free of charge to other Departments of the State, a question which is at the moment under consideration. It is practically certain, however, that whatever charge may be levied in future, it will be substantially lower than the charge made by several other Departments of the State, both in India and at Home, for the services rendered by them to other Departments of the State and to other authorities and persons. The revised scale of charges introduced in the Test House and the Metallurgical Inspectorate excludes entirely the element of profit and was framed after careful consideration so as to constitute merely a reasonable return for the services rendered and also with due regard to the principle of non-interference with private enterprise. In pursuance of the decision that the Department should be self-supporting, it was decided to maintain a profit and loss account of each separate entity in the Department and of the Department as a whole. This account, which will be of material assistance in determining whether the existing charges are suitable, will be commenced during the ensuing financial year, and the results will be exhibited in the next report. A detailed comparative statement of the accounts of the preceding year and the year under report is appended (Appendix V).

23. To obviate a complaint which is often made by suppliers in respect of their dealings with Government Departments of delays in payment for goods purchased, an arrangement was introduced during the course of the year providing for the payment of 90 per cent. of the amount of bills immediately after the completion of the inspection of stores and on the receipt by the Department of proof of despatch by suppliers, the balance of the amount due being paid after the receipt and verification of the stores by the consignees. This arrangement, while sufficiently safeguarding the interests of Government, has been much appreciated by suppliers, and there is reason to hope that it will have the effect of enabling the Department to effect its purchase at appreciably cheaper rates than it would have to pay were the ordinary procedure of payment after receipt and certification of stores by consignees to be followed.

DELHI;

J. S. PITKEATHLY,

Chief Controller of Stores.

The 13th December 1924.

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APPENDIX I.

Gazetted Staff of the Indian Stores Department.

Designation.	Name.	Pay.	Date of appointment	REMARKS.
HEADQUARTERS.				
		Rs.		
Chief Controller of Stores ..	J. S. Pitkeathly, C.I.E., C.V.O., C.B.E., D.S.O.	3,000—100—3,500	1st January 1922 ..	Lt.-Col. K. M. Kirkhope, C.I.E., V.D., officiated in the post from the 18th October 1923 to the 27th January 1924 in addition to his own duties during Mr. Pitkeathly's ab- sence on leave.
Director of Inspection ..	Lieut.-Col. K. M. Kirkhope, C.I.E., V.D., M.I.E. (I).	2,250—100—2,750	23rd May 1923.	
Director of Purchase and In- telligence.	Lieut.-Col. H. M. Alexander, D.S.O., O.B.E., I.A.	2,000—100—2,500	1st January 1922.	
Deputy Director of Purchase, (Textiles).	R. W. Targett	1,500—75—1,800	1st January 1922	
Deputy Director of Purchase (Engineering).	C. A. Williams	1,500—75—1,800	15th June 1923.	

Officer on Special Duty ..	P. J. Gahan, M.B.E. ..	1,500	9th November 1923	Abolished from 10th May 1924.
Assistant Chief Controller of Stores.	R. R. Reaks, M.B.E. ..	1,000—50—1,250	26th February 1922.	
Assistant Director of Inspection.	A. G. Khan, B.A., M.Sc., (Tech.) A.M.I.E.E.	950—50—1,200 Spl. pay Rs. 100	18th June 1923.	
Assistant Director of Purchase (Textiles).	D. Sadasivam, B.Sc. (Tech.), A.M.C.T.	1,000—50—1,200	1st December 1922	
Assistant Director of Intelligence.	R. S. D'Arcy	800—50—1,000	8th May 1923.	

OFFICE OF THE SUPERINTENDENT, GOVERNMENT TEST HOUSE.

Superintendent, Government Test House.	H. A. F. Musgrave ..	1,000—50—1,500 P. A. Rs. 250	5th May 1910 ..	Mr. N. Brodie officiated in the post from the 9th November 1923, in addition to his own duties <i>vice</i> Mr. Musgrave on leave.
Chemist	N. Brodie, M.Sc., F.C.S., A.I.C.	750—50—1,000 <i>plus 15% tempy. increase.</i>	27th December 1913.	
Physicist	E. F. G. Gilmore	950—50—1,200	12th February 1924.	
Assistant Chemist	B. N. Ghosh, M.Sc., P.R.S. (Cal.), D.Sc., F.C.S. (Lond.).	750—50—900	7th May 1923.	
Assistant Engineer	M. K. Deane	500—25—750	28th October 1922..	Services terminated with effect from the 31st August 1923.
Assistant Engineer	A. N. Chowdhuri	500—25—750	1st September 1923.	
Officer on Special Duty ..	M. K. Deane	500	1st September 1923..	Services terminated with effect from the 31st October 1923.

Designation.	Name.	Pay.	Date of appointment.	REMARKS.
OFFICE OF THE METALLURGICAL INSPECTOR, JAMSHEDPUR.				
Metallurgical Inspector ..	R. Mather	Rs. 3,000	18th December 1922.	Mr. N. Garret-Smith officiated in the post from the 14th April 1923 to the 27th March 1924, in addition to his own duties <i>vice</i> Mr. Mather on leave from the 14th April 1923 to the 19th August 1923 and on deputation to the Tariff Board from the 20th August 1923 to the 27th March 1924.
Assistant Metallurgical Inspector.	N. Garrett-Smith	750—50—950*	18th December 1919.	
Ditto ..	R. C. Arbery	350—30—590*	1st March 1916.	
Ditto ..	P. Hinde	475—50—575*	14th November 1921.	
Ditto ..	N. N. Ghosh	325—50—425*	18th October 1921.	
Ditto ..	Prem Singh Sharma	325—50—425*	22nd April 1922.	
Chemist	B. C. Mukerji	250—25—500*	8th August 1921.	*Plus a share of the fees recovered for work done by the Inspectorate for private individuals and firms.

OFFICE OF THE CONTROLLER OF INSPECTION, CALCUTTA CIRCLE.

Controller of Inspection	..	H. F. Davy, A.M.I.C.E., A.M.I.E. (Ind.)	1,250—100—1,750	1st May 1923.	
Inspector	..	J. C. Burnett	500—50—750	6th February 1917..	On leave preparatory to retirement.
Do.	..	T. H. Radford	500—50—750	15th October 1921	
Do.	..	E. H. G. Barefoot	500—50—750	2nd April 1922.	
Do.	..	H. Lewin	500—50—750	21st April 1922.	
Do.	..	J. Stephens	500—50—750	19th May 1921 ..	Transferred as Inspector in-charge, Karachi Agency, with effect from the 12th January 1924.
Do.	..	D. R. Millar	500—50—750	14th September 1923	
KARACHI INSPECTION AGENCY.					
Inspector in charge	..	J. Stephens	500—50—750	14th January 1924.	

APPENDIX II.

Statement showing the value (in thousands of rupees) of the various classes of purchases during the year 1923-24.

Class of goods.	VALUE.				
	STORES PURCHASED IN THE INDIAN MARKET.		Imported stores purchased through the D. G. of Stores, London.	Imported stores purchased direct from outside India.	Stores purchased from Government Surplus Stores Depôts.
	Indigenou s.	Imported.			
1. Cotton materials	4,709	65	..	..	..
2. Woollen materials	4,138	1,150	..	..	..
3. Jute, canvas, etc., materials ..	1,409	29	..	..	209
! Total textiles stores ..	10,256	1,244	..	..	209
4. Engineering stores and Miscellaneous.	4,889		..	29	97
TOTAL ..	16,389		..	29	306
			16,724		

APPENDIX III.

Statement showing the value (in thousands of rupees) of stores purchased on behalf of various organizations utilising the services of the Indian Stores Department during the year 1923-24.

Organization.	TEXTILE STORES.			Engineering and Miscellaneous stores.	Total.
	Cotton.	Woollen.	Jute canvas, etc.		
CENTRAL.					
<i>Army.</i>					
1. Quartermaster General in India	4,585	5,201	433	..	10,219
2. Director of Farms .. ..	..	..	123	64	187
3. Director of Remounts .. ..	..	..	4	..	4
4. Ordnance Factories	76	47	31	..	154
5. Military Engineering services ..	3	..	5	1,025	1,03
<i>Civil.</i>					
6. Govt. of India Sectt. Offices ..	3	7	1	..	11
7. Mily. Secy. to H. E. the Viceroy.	..	1	..	..	1
8. Director General, Posts and Telegraphs.	10	..	322	21	353
9. Survey of India (Northern Circle.)	14	19	..	..	33
10. Controller of Printing, Stationery and Stamps.	..	..	2	2	4
11. Superintendent, Govt. Printing, India, Calcutta, Delhi and Simla.	..	..	4	..	4
12. Northern India Salt Revenue	..	..	..	44	44
13. Controller of Customs, Burma	..	..	..	3	3
<i>Railways.</i>					
14. North Western Railway .. ..	..	..	33	859	892
15. O. and R. Railway .. ..	..	..	44	1	45
16. Central Indian Coalfield Railway Survey.	1	..	..	..	1
Carried over	4,692	5,275	1,002	2,019	12,983

Organisation.	TEXTILE STORES.			Engineering and Miscellaneous stores.	Total.
	Cotton.	Woolen.	Jute canvas, etc.		
Brought forward ..	4,692	5,275	1,002	2,019	12,988
<i>CENTRAL—contd.</i>					
<i>Minor administrations.</i>					
17. Delhi, P. W. D. .. ..	..	..	..	869	869
18. N. W. F. Province Police Department	49	12	..	..	61
<i>PROVINCIAL.</i>					
<i>Bombay.</i>					
19. Ptg. and Stationery Deptt. ....	..	..	4	..	4
20. Development Department ..	..	..	..	77	77
21. P. W. D. (L'oyd Barrage Project).	..	..	..	658	658
22. Police Department	20	1	..	..	21
<i>Bihar and Orissa.</i>					
23. Jail Department	12	..	..	..	12
24. Printing Department ..	..	..	2	..	2
<i>Punjab.</i>					
25. P. W. D. .. ..	..	..	29	1,342	1,371
26. Director of Industries ..	..	..	..	49	49
<i>Burma.</i>					
27. Jail Department .. ..	..	..	3	..	3
<i>Colonial.</i>					
28. South African Government ..	..	..	605	..	605
Carried over ..	4,773	5,288	1,645	5,014	16,720

Organisation.	TEXTILE STORES.			Engineering and Miscellaneous stores.	Total.
	Cotton.	Woollen.	Jute canvas, etc.		
Brought forward ..	4,773	5,288	1,645	5,014	16,720
<i>Miscellaneous items (below Rs. 1,000 in each case).</i>					
29. Auditor General					
30. Currency Office, Bombay ..					
31. Controller of Printing, Stationery and Stamps.					
32. Forest Research Institute, Dehra Dun.					
33. N. W. F. Province Jail Department					
<i>Bengal.</i>					
34. Police Department	1	..	2	1	4
35. P. W. D.					
<i>Bombay.</i>					
36. Stationery and Printing Department.					
<i>Bihar and Orissa.</i>					
37. P. W. D.					
<i>United Provinces.</i>					
38. Diest. Judge, Muzaffarpur ..					
<i>Punjab.</i>					
39. P. W. D.					
TOTAL ..	4,774	5,288	1,647	5,015	16,724

APPENDIX IV.

The Government Test House is equipped with the apparatus mentioned below by means of which tests can be carried out for Government and public Departments at a small charge.

Engineering Laboratory.

1. One 100-ton Buckton Horizontal Testing Machine, hydraulically controlled, for tensile, compression and transverse testing. This machine takes test pieces up to a maximum size of 10 feet. It is suitable for steel and metal bars, steel wire ropes, chains, railway couplings, stone and concrete blocks, bricks, etc.
2. One 10-ton Avery Testing Machine for tensile, compression and transverse testing.
3. One 10,000-lbs. Avery Universal Testing Machine for tensile, compression and transverse testing.
4. One 120-foot-lb. Avery Izod type Impact Testing Machine for carrying out notched-bar tests on metals.
5. One Buckton double sided cold and temper bend testing machine.
6. One Avery Fatigue Testing Machine. This machine is of the rotating bar type in which the test specimens are subjected to a uniform bending moment while revolving on their own axles.
7. One hydraulic Testing Machine for testing stoneware and other pipes up to 18" in diameter and 3' in length.
8. One Bailey Hydraulic Testing Machine for carrying out porosity and pressure tests on cocks, valves, etc.
9. One Brinell Hardness Machine for determining the hardness of all metals and alloys.
10. One Thurston Oil Testing Machine for testing oils under practical conditions of use.
11. One 5-foot ton Avery Impact Testing Machine for carrying out impact tests on railway couplings and draw gear.
12. One Brotherhood Pressure Gauge Testing Apparatus. 0-6,000 lbs. per sq. inch.
13. One Brotherhood Vacuum Gauge Testing Apparatus. 20-6,000 lbs. per sq. inch.
14. One Lawrence and Mayo Anemometer for measuring air velocities up to 2,000 feet per minute.
15. One Ewing Extensometer complete with marking-off jig for test pieces.

Machine tools.

(a) One 6" centres S. S. and S. C. heavy duty Buckton lathe.

(b) One 4" centres S. S. and S. C. Holbrook lathe.

(c) One Buckton test piece preparing machine for shaping flat test pieces for determination of tensile strength.

- (d) One Band saw.
- (e) One power hack saw.
- (f) One Smith and Coventry sensitive drilling machine.
- (g) One Butler shaping and slotting machine.
- (h) One Emery grinder.
- (i) One light motor grinder.
- (j) One grindstone, treadle driven.
- (k) One polishing machine.
- (l) One end-runner mill for paint.
- (m) One cone mill for paint.

Cement Testing Section.

1. One Adie cement tensile testing machine.
2. One Ro-tap sieving machine.
3. One Smith-Edward cement testing machine.
4. Vicat-needle setting time testing sets.
5. LeChatelier soundness testing sets.
6. One Thermograph.
7. One chemical balance.
8. Maturing tanks and damp boxes.

Road Metal Testing Section.

1. One Deval 4-Cylinder attrition testing machine.
2. One ball mill.

Cloth Testing Section.

1. One Goodbrand Lea-testing machine for tensile tests.
2. One Dronsfield wrap reel.
3. One Goodbrand fabric testing machine for tensile tests on cloth, etc.
4. One Casartelli microscope cloth counting glass.

Electrical Testing Section.

1. One ohmmeter by Nalder Bros.
2. One Wheatstone bridge and portable battery set by Elliot Bros.
3. One portable voltmeter-ammeter test set by Nalder Bros., reading up to 600 volts and 600 amperes.

Miscellaneous.

1. Copper oven for determining the moisture content of bricks, concrete blocks, etc.
2. One portable forge.
3. Anvils.
4. Vices etc.

Office of the Inspector in charge, Karachi Inspection Agency.

Revenue.			Expenditure.		
	Rs.			Rs.	
Inspection fees and Miscellaneous Receipts.	Nil.		Pay of officers	1,286	
			Pay of establishment	61	
			Allowances	953	
Debit balance	3,668		Contingencies	1,368	
Total	3,668		Total	3,668	

Abstract of Revenue and expenditure of the Indian Stores Department during the year 1923-24.

Heads.	Revenue.	Expenditure.	Credit balance + debit balance—	
			Rs.	Rs.
Headquarters	1,47,412	3,45,908	—1,98,496	
Government Test House	89,825	3,69,229	—2,79,404	
Metallurgical Inspectorate	2,01,979	1,14,595	+87,384	
Calcutta Inspection Circle	1,30,434	89,267	+41,167	
Karachi Inspection Agency .. ..	..	3,668	—3,668	
	5,69,650	9,22,667	—3,53,017	
Debit balance	3,53,017	..	..
Total	9,22,667	9,22,667	..	

