

1) United Provinces and Bihar. Joint Power Alcohol and Molasses
Inquiry Committee : Report.

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2) United Provinces. Cawnpore. Labour Enquiry Committee
Report. X:9.252CC.N386 G8

REPORT
OF THE
JOINT POWER ALCOHOL AND MOLASSES
INQUIRY COMMITTEE
WITH ANNEXURES
BIHAR AND THE UNITED PROVINCES

1938



ALLAHABAD:
SUPERINTENDENT, PRINTING AND STATIONERY, UNITED PROVINCES, INDIA
1938

No. 3473/XVIII—923
GOVERNMENT OF THE UNITED PROVINCES
INDUSTRIES DEPARTMENT

RESOLUTION

Dated June 21, 1939

READ—

The report of the Joint Power Alcohol and Molasses Enquiry Committee, Bihar and the United Provinces, 1938.

THE problem of the utilization of molasses, especially for the manufacture of power alcohol, has been engaging the attention of both Government and the public for some years. The Governments of the United Provinces and Bihar accordingly appointed a committee in January, 1938, to go into the whole question and report as to the best way of dealing with the problem. The committee consisted of—

- (1) Dr. N. R. Dhar, D.Sc., F.I.C., I.E.S., Professor, Allahabad University,
- (2) Mr. G. H. Dickson, Messrs. Begg, Sutherland & Co., Cawnpore,
- (3) Mr. Ananthasubramanayam, Mysore Sugar Co., Ltd., Bangalore,
- (4) Mr. P. S. Maker, Chief Chemist, Majhulia Sugar Factory, district Champaran,
- (5) Lala Padampat Singhania, Cawnpore,
- (6) Mr. M. P. Gandhi, Chief Commercial Manager, The Rohtas Industries, Ltd.,
- (7) Dr. S. S. Bhatnagar, O.B.E., D.Sc., F.INST.P., Professor of Punjab University, and
- (8) Dr. N. G. Chatterji, D.Sc., Harcourt Butler Technological Institute, Cawnpore.

The report of the Committee was received in the middle of June and has been further examined by both Governments. The most important points that have to be considered in this connexion are whether the manufacture of power alcohol is a sound economic proposition and what arrangements are to be made for the disposal of the power alcohol when manufactured.

2. The total quantity of molasses produced in vacuum-pan sugar factories in the United Provinces and Bihar has been estimated at 300,000 tons a year of which, it appears, nearly 200,000 tons are mixed with factory effluent and discharged into neighbouring fields and watercourses as waste, thereby polluting the local sources of water supply, giving rise to offensive odours and causing numerous complaints from the local inhabitants. Some 3 years ago an exporting company undertook to purchase molasses at four annas a maund, but it appears that in 1936-37 they purchased some 80,000 tons at an average price of just over one anna a maund, while the quantity purchased since is much less. The value of the molasses lost at four annas a maund comes to 13½ lakhs of rupees annually.

3. If power alcohol were to be manufactured from molasses, it is estimated that the output would be 2·2 gallons of alcohol from

one maund of molasses or 60 gallons from one ton. Hence the United Provinces and Bihar could between them produce 120 lakhs of gallons of power alcohol a year. The Committee have however recommended that for the present only as much power alcohol should be manufactured as can be absorbed in the United Provinces and Bihar, and the Governments of both provinces are disposed to accept this. They also agree that the minimum economic unit for manufacture should be taken to be a plant of a capacity of 2,200 gallons a day, which it is estimated will cost $2\frac{1}{2}$ lakhs of rupees. A number of such plants may be put up at convenient places, the plant being duplicated where a central distillery is found to be more convenient for the purpose of distribution of power alcohol as in the case of Bihar.

4. The cost of manufacture, if a plant of this size is installed, has been estimated by the Committee at from 3 to $3\frac{1}{2}$ annas per gallon of alcohol produced, excluding the cost of molasses. Since the report of the Committee was written, it has come to light that no recurring royalty will have to be paid for the use of the patent process to be adopted. Hence the cost of manufacture may be taken to be 3 annas. It has been suggested that this cost can be reduced by having one large-scale plant instead of a number of smaller ones, but this need not be considered for the present. Even allowing for the price of molasses at annas 4 a maund, and another anna 1 pies 6 as the cost of transfer thereof, the cost of the molasses in one gallon of power alcohol comes to annas 2 pies 6 and the cost of production of one gallon of alcohol to annas 5 pies 6.

5. In order to arrive at the actual selling price, it is necessary to add to this figure the amount of the excise duty, if any, and the actual distribution and selling costs. The latter should not exceed $3\frac{1}{2}$ annas a gallon and even if the excise duty is calculated at the same rate as the customs duty on petrol, the total cost comes to Re.1-3 a gallon which is appreciably lower than the price of petrol in the United Provinces and Bihar. It thus appears that it is an economic proposition to manufacture power alcohol, provided it can be used in these provinces.

6. Practically the only use for power alcohol is as a motor fuel, mixed with petrol. The Governments of the United Provinces and Bihar are satisfied that the admixture of 20 per cent. of power alcohol with petrol is unobjectionable from the point of view of the motor industry and are prepared to undertake legislation to make such admixture compulsory in the United Provinces and Bihar, unless other suitable arrangements can be made for the same. As the total quantity of petrol consumed in these provinces is in the neighbourhood of 90 lakhs of gallons a year, it is possible to replace some 18 lakhs of gallons of petrol by power alcohol. In other words some 30,000 tons of molasses can be utilized in this way.

7. The Provincial Governments realize that this will not solve the problem of surplus molasses. But a useful beginning can be made and it may be possible later to arrange to supply power alcohol to other provinces also at a price which is not appreciably higher than that of petrol, especially if the excise duty is reduced to the level of the customs duty on petrol, excluding the surcharge. For the present, however, the two Governments intend to proceed with the making of suitable arrangements for the manufacture and sale of power alcohol in these provinces.

8. In conclusion, the Governments of the United Provinces and Bihar desire to thank the members of the Committee for their arduous work and their valuable report; which will serve as a useful guide for the development of the power alcohol industry.

ORDER—Ordered that a copy of this resolution be forwarded to the members of the Committee for their information.

Ordered also that a copy of this resolution be sent to the Director of Industries, the Director of Agriculture, the Excise Commissioner, the Director of Public Health, the Inspector General of Civil Hospitals, the Inspector General of Police, the Registrar, Co-operative Societies, the Chief Engineers, Public Works Department, Buildings and Roads and Irrigation Branches, the Chief Conservator of Forests, the Director of Public Instruction and the Director of Public Information.

Ordered also that a copy be sent to all Commissioners of Divisions, all district officers, and all vacuum-pan sugar factories in the United Provinces for information.

Ordered also that a copy be sent to the Central Government and the Government of the Bihar for information.

Ordered also that a copy of this resolution be published in the *United Provinces Gazette*.

By order,
N. C. MEHTA,
Secretary to Government,
United Provinces.

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APPENDIX I

Agreement, dated the 9th August, 1937, between the Employers' Association of Northern India and the Cawnpore Mazdur Sabha

THE strike situation at Cawnpore was further discussed today and the terms suggested by the Mazdur Sabha were considered. The following terms were accepted by the representatives of the Northern India Mill-owners' Association as well as by the office-bearers of the Mazdur Sabha and Labour leaders of Cawnpore :

(1) The Mazdur Sabha shall be recognized by the Mill-owners as a duly constituted organization to represent the factory labour of Cawnpore.

(2) There shall be no victimization of workers for the active participation in strike or in normal Union activities.

(3) The Mill-owners shall continue to stop bribery, maltreatment and dismissal by the jobbers.

(4) Wage rates shall be displayed in the mills and the rates for each variety and count shall be made known to each worker before he is required to begin work on that particular variety or count.

(5) Each worker shall be supplied with a card showing the rates of wages for each variety and the total produce of the same to be stated indicating the total earning.

(6) Wages shall be distributed to the workers one by one and each worker shall be given opportunity to examine the coins and money received by him.

(7) There shall be no overtime work without payment.

(8) All workers joining the work within five days of the opening of the mill shall be employed.

(9) The existing practice, according to which wages are distributed in one or two days fortnightly shall be maintained wherever it obtains at present, and as regards other mills wages will be paid up in not more than three consecutive days every fortnight.

(10) All notices issued by the company shall be written and placed on its notice-board.

(11) There will be no work on Sundays during the pendency of the inquiry and the question as to whether Sundays should be observed as holidays after the completion of the inquiry, irrespective of any holiday in the week, shall also be referred to the Committee of Inquiry. In the meanwhile, the question may be further discussed between the Mill-owners' Association and the Mazdur Sabha and whenever they agree any mill may be worked on any Sunday even during the pendency of the inquiry. The provision that no work need be done on Sundays during the pendency of the inquiry should not prejudice the inquiry into the question for the future.

(12) The question of short shifts and the proposal that every worker shall be continuously employed for ten hours with an interval of one hour shall also be referred to the Committee of Inquiry.

(13) Workers dismissed during the last two months for participating in strikes or other Trade Union activities shall be reinstated in their original posts.

(14) No wage cuts, direct or indirect, nor any further intensification shall take place pending the report of the Committee of Inquiry.

(15) If any dispute arises regarding the execution of the terms of this Agreement, it will be referred to the Committee of Inquiry to be appointed by the Government.

(16) There shall no strike without due notice and none during the pendency of the inquiry.

(17) The mill-owners will not make any rule prejudicial to the general conditions of labour without reasonable notice to the Mazdur Sabha.

(18) An inquiry committee consisting of one representative of the Mazdur Sabha, one representative of the employers and such number, not exceeding three, as may be nominated by Government, shall be appointed to inquire into—

(a) the question of wage cuts,

(b) the percentage of increase in wages in case the wage cut is established,

(c) the question of increase in wages in case they are found to be too low irrespective of whether or not there has been a wage cut,

(d) the schemes of intensification of labour introduced or intended to be introduced by the mill-owners and ways and means of safeguarding the rights of workers in this connexion,

(e) the general condition of labour in factories,

(f) the working of the jobber system and the advisability or otherwise of abolishing the same, and

(g) the question of emergency leave with pay for 15 days in a year.

(The Committee to submit its report within two months of the date of appointment.)

(19) The strike will be called off and labourers shall return to work by Tuesday morning (August 10).

(20) The above Agreement shall apply to all the mills and mill-workers in Cawnpore.

The terms of reference to the Committee of Inquiry shall be settled by the Government and it will be open to them to refer any matter or matters besides those mentioned above to the said committee.

HARIHAR NATH SHASTRI,

President,

Cawnpore Mazdur Sabha.

S. S. YUSUF,

Secretary,

Mazdur Sabha.

ARJUN ARORA,

RAJA RAM SHASTRI.

Joint Secretary,

Mazdur Sabha.

THE above terms are the outcome of an undertaking intimated on the 8th August, 1937, on behalf of the Employers' Association of Northern India to the Hon'ble the Prime Minister personally and having been submitted to the Association by the Prime Minister are accepted by the Employers' Association of Northern India.

The Association wish to point out that clauses nos. 3, 6, 7 and 10 have continually been adhered to by the employers in the past and involve no change in procedure. Accordingly it is not apparent why these points have been raised at all.

H. W. MORGAN,

Secretary.

T. GAVIN JONES,

Chairman.

9-8-'37.

APPENDIX II

Questionnaire by the Committee appointed by Government to inquire into wages and conditions of labour in Cawnpore

The following questionnaire is issued by the Committee appointed by Government to inquire into wages and conditions of labour in Cawnpore with a view to elicit information, opinions, and suggestions. The questions are not exhaustive, nor it is expected that all questions should be answered.

Persons or Associations who may be willing to help the Committee by separate notes or memoranda on any subject referred in the questionnaire and with which they are intimately connected, are invited to do so.

All papers should reach J. Nigam, Esq., I.C.S. (Director of Industries and Commerce, United Provinces), Secretary of the Committee, Nawabganj, Cawnpore, before the 15th of October, 1937.

Oral evidence may be called for on the basis of and as required by the replies and statements received.

Copies of the questionnaire can be obtained from the Secretary.

RAJENDRA PRASAD,
President.

Questionnaire issued by the Committee appointed by Government to inquire into wages and conditions of labour at Cawnpore

1. Please state the average rates of time-wages paid to various classes of workers for various classes of works in your mills for (1) 1929 or the year nearest thereto and (2) 1937. If there has been any decrease, please state the reasons for the same?

2. On what basis is the allocation of work made to the operatives in different sections of your mill, particularly when they are engaged on daily wage rate? Please give details, e.g. number of cards allocated for lap carriers, cards attended by a tenter, number of spindles assigned per piecer, number of frames assigned per set of doffers, etc. if any additional duties are assigned to them other than indicated by their designation please specify the same.

3. Please give the piece-wage rates for different operations in each section of your (1) carding, (2) spinning, (3) weaving, (4) dyeing and bleaching and (5) finishing and (6) packing departments of your mill. How is the actual wage earned by an operative computed from the list, please illustrate.

4. On what basis is the piece rate for each operation fixed? Has there been any decrease in the same since 1929 and how has it affected the earning of the worker?

5. What changes, if any, are made in the piece rates due to variations in quality of material, count of yarn, intricacy of weave and design, altered working conditions?

6. Are the workers aware of the rates of wages to which they are entitled and are the rate lists put up in each department?

7. What bonus or extra allowance is being paid to the workmen in your mill in addition to time or piece-wages? Have there been any changes since 1929?

8. Please give, if possible, the rates of time and piece-wages prevailing in Bombay, Ahmedabad, Sholapur, Nagpur, Delhi, Madras, Calcutta and Indian States for similar occupations?

9. How have the standard and the cost of living of industrial workers in Cawnpore varied since 1929?

10. Please give a general idea of the total profits made, the rates of dividends declared to various classes of share-holders and the amount of Reserve Fund maintained by your mills from year to year since 1929?

11. Do you think the prevailing rates of wages in Cawnpore sufficient to enable workers of all grades to maintain, working efficiency and a reasonable standard of comfort? If not, what adjustments do you think necessary to achieve this object? Please support your view by facts and figures.

12. Should a minimum rate of wages be prescribed for any class of labour at Cawnpore? If so, please indicate the classes and the minimum rates advocated for each.

13. What are the existing arrangements as regards shifts in your mill? Is it possible to evolve a system in which no labourer need remain in or near the mills for more than 10 hours including an interval of one hour? If not, please state the effects on industry and labour of adhering to the two shifts system.

14. Is it desirable to prohibit the system of overlapping shifts altogether? If so, should the law be amended to permit textile mills at their discretion to have three continuous shifts of 8 hours each as in continuous industries like sugar, oil, etc.? If this results in lowering wages due to lesser hours of work, should any conditions be imposed in order to prevent a decrease in wages payable for various kinds of work?

15. Are there any schemes of rationalization or intensification of labour in force or under contemplation in your mills? If so, please give details. To what extent have similar schemes been introduced in other mills in outside Cawnpore?

16. To what extent and in what ways are the earnings of employees and the interests of the employers affected by these schemes? What in your opinion is the effect of these schemes on the health and efficiency of labour?

17. Please describe in detail the system of recruitment and supervision of labour in your mills? What steps are taken in your mills to verify the reports of the supervising staff regarding the work and conduct of labourers? What opportunities are given to a worker to explain his position before dismissal or other drastic punishments are inflicted?

18. How complaints made against the supervising staff by workers individually or collectively, particularly as regards mal-treatment or corruption, dealt with by the management?

19. Can you suggest any means of combating bribery, mal-treatment and corruption, if any, under the existing arrangements of recruitment, supervision, suspension and dismissal of mill-workers?

20. Is it desirable to fix the number of working days in a year? If so, what should that number be taking into consideration the number allowed in other parts of India?

21. What days, if any, should be observed as holidays in factories in addition to or in lieu of Sundays?

22. For what period should leave be granted to workers in cases of sickness or emergency (a) on full pay, (b) on half pay and (c) without pay?

23. Do you think mills should grant leave to their workmen with or without pay, for each year of service (when they could go home, or take a rest)? If so, what period of such leave would you fix? What effect, in your opinion, will such leave have on absenteeism and continuity of service?

24. Are any improvements required in the general working conditions inside the mill in respect of matters such as facilities for meals, drinking water, attending to calls of nature, medical relief, etc.?

25. Are there any special difficulties experienced by employers and employees in the working of the mills? If so, what remedies do you suggest?

APPENDIX III

**Names of witnesses who appeared before the Labour
Inquiry Committee**

On behalf of the Employers' Association of Northern India, Cawnpore

- (1) Sir T. Gavin Jones, President, Employers' Association, assisted by Messrs. Carnegie and Tosh.
- (2) Mr. H. A. Wilkinson, Managing Director, Elgin Mills, assisted by Mr. S. Catterall, Manager (3 days).
- (3) Mr. J. Tinker, Managing Director, Cawnpore Cotton Mills, assisted by Mr. B. Shaw, Manager.
- (4) Mr. Padampat Singhania, representing the Juggilal Kamlapat Group of Mills (4 days).
- (5) Mr. G. D. Price, Managing Director, Muir Mills, assisted by Mr. Rhodes, Weaving Master.
- (6) Rai Bahadur L. Bhagwan Das, Proprietor, Messrs. Bevis & Co., assisted by Mr. P. L. B. Ridsdale, Manager.
- (7) Mr. H. Horsman, Managing Director, Swadeshi Cotton Mills.
- (8) Mr. C. A. Watt, Managing Director, Cawnpore Woollen Mills, assisted by Mr. Bancroft.
- (9) Mr. Ali Ahmad, Mistri, Cawnpore Cotton Mills.
- (10) Mr. Abdul Latif, Mistri, Cawnpore Cotton Mills.
- (11) Mr. Mohammad Khan, Mistri, Cawnpore Cotton Mills.

On behalf of the Mazdur Sabha, Cawnpore

- (12) Mr. Harihar Nath Shastry, President, Mazdur Sabha.
- (13) Mr. Shitla Prasad Saxena, M.A., Lecturer, Lucknow University, Government Adviser to Mazdur Sabha.
- (14) Laloo, employed in the weaving department of the Elgin Mills.
- (15) Shivadhar, working on a winding machine in the Elgin Mills.
- (16) Ram Charan, employed in the weaving department of the Cawnpore Textile Mills.
- (17) Zawwar Husain, employed, in the weaving department of the Cawnpore Woollen Mills.
- (18) Mangli Prasad, employed in the drawing department of Cawnpore Cotton Mills.
- (19) Musahib Ali, ex-employee of the Lakshmi Ratan Cotton Mills. (His evidence could not be completed and it was decided to ignore it altogether).

On behalf of the Municipal Board, Cawnpore

- (20) Mr. B. P. Srivastava, Chairman, assisted by Dr. S. N. Tewari, Executive Officer.

On behalf of the Improvement Trust, Cawnpore

- (21) Rai Bahadur L. Sri Narain, Executive Officer.

On behalf of the British India Corporation

- (22) Mr. A. L. Carnegie, Chairman of the Board of Directors.

On behalf of the Department of Factories and Boilers, United Provinces

- (23) Mr. Abdul Hai, officiating Chief Inspector of Factories and Boilers, United Provinces,

APPENDIX IV

Category no. 1—Opener attendants

N.G.=Information not given.

1	2	3	4	5	6	7	8	9	10	11	12	
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1930	8	14 18 8	'91	91	118·625	1937	10	14 14 7	1·02	89	149·114
B .. ..	..	Not working	..	Started 1935	..	..	1937	2	17 0 0	1·16	N.G.	84·000 April given.
C	1933	4	17 9 7	1·08	1·0	70·408	1937	4	17 14 0	1·22	N.G.	71·500
D	1931	15	18 0 0	1·11	95	70·000	1937	10	17 10 6	1·21	96	178·582
E	1929	12	16 14 0	1·04	96·5	202·500	1937	12	17 1 0	1·17	96·5	204·750
F .. ..	..	Not working	..	Started June, 1938.	..	..	1937	2	11 6 0	·78	N.G.	22·750
G	1929	18	15 10 0	'96	..	281·250	1937	18	15 10 0	1·07	..	281·250
H	1929	N.G.	19 8 0	1·20	N.G.	..	1937	N.G.	19 8 0	1·33	N.G.	..
I	1929	6	14 1 8	'87	N.G.	84·468	1937	7	18 12 8	'94	N.G.	96·359
J	1930	2	15 6 0	'95	50	30·750	1937	2	16 0 0	1·09	100	82·000
K	1934	2 Feeder	16 8 0	1·02	N.G.	93·000	1937	2 Feeder	16 8 0	1·13	N.G.	38·000
		3 Front	18 0 0	1·11	..	54·000		3 Front	18 0 0	1·23	..	86·000
Total columns 3 and 7	..	70	..	..	..	1144·999	..	71	..	..	..	1,197·265

Result of 7 ÷ 8 average per person reported 16·35
 Result of 7 × 16 (to give annas) ÷ 260 to give annas per hour 1·008
 X by 16 to give annas ÷ 284 = annas per hour 16·08
 Decrease
 Increase 8·94 (annas per hour) 1·96

Category no. 2—Scatcher tenters

N. G.=Information not given

1			2	3		4	5	6	7		8			9		10		11	
Name of mill			1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns nos. 3 and 4 multiplied					
					Rs. a. p.			Rs.			Rs. a. p.			Rs.					
A	..	..	1980	16	16 5 0	1'00	91	261'000	1987	17	15 12 11	1'08	91	268'728			
B	..	..	..	Not working	..	..	..	..	1987	1	17 0 0	1'16	N.G.	17'000
C	..	..	1988	6	17 12 2	1'09	N.G.	106'562	1987	8	17 14 0	1'22	N.G.	148'000			
D	..	..	1981	9	18 0 0	1'11	95	162'000	1987	9	17 10 6	1'21	86	158'908			
E	..	..	1929	8	16 14 0	1'04	100	135'000	1987	8	17 1 0	1'17	100	138'500			
F	..	..	..	Not working	..	..	..	..	1987	6	11 6 0	·78	N.G.	68'250
G	..	..	1929	81	15 10 0	·96	N.J.	481'875	1987	81	15 10 0	1'07	N.G.	484'875			
H	..	..	1929	N.G.	19 8 0	1'20	N.G.	..	1987	N.G.	19 8 0	1'33	N.G.	..			
I	..	..	1929	27	15 4 9	·94	N.G.	418'015	1987	28	14 15 8	1'02	N.G.	418'687			
J	..	..	1980	9	14 15 0	·92	70	134'487	1987	9	14 0 0	·96	95	126'000			
K	..	..	1934	7	18 0 0	1'11	N.G.	126'000	1937	7	18 0 0	1'23	N.G.	126'000			
Total columns 3 and 7			..	118	..	..	..	1,822'889	..	124	..	..	..	1,947'441

Result of 7÷3 average per person reported 16'13
 Result of 7×16 (to give annas) ÷ 260 to give annas per hour 992

× by 16 to give annas ÷ 234 = annas per hour .. 15'70
 Decrease 8'28 per cent. (annas per hour) .. 1'074
 Increase

Category no. 3—Lap carriers

N.G.=Information not given.

1	2	3	4	5	6	7	8	9	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per-centage attend-ance	Total colt:mns nos. 8 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per-centage attend-ance	Total colt:mns nos. 8 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1980	12	15 15 7	'98	94	191'687	1987	18	14 2 4	'97	85	254'624
B .. ..	..	Not working	..	..	..	..	1937	6	1 0 0	1'09	N.G.	96'000
C	1983	7	16 5 3	1'00	N.G.	114'818	1987	8	17 7 6	1'19	N.G.	139'750
D	1981	12	17 14 0	1'10	96	214'530	1987	8	23 8 6	1'54	95	180'250
E	1929	17	20 14 6	1'29	94'8	355'408	1937	16	22 8 6	1'52	93'8	355'500
F .. ..	..	Not working	..	..	..	..	1937	8	11 6 0	'78	N.G.	94'125
G	1929	16	15 10 0	'98	N.G.	250'000	1937	15	15 10 0	1'07	N.G.	224'375
H	1929	N.G.	19 8 0	1'20	N.G.	..	1937	N.G.	19 8 0	1'28	N.G.	..
I	1929	8	15 4 0	'94	N.G.	122'000	1937	10	14 14 6	1'02	N.G.	149'062
J	1980	6	15 4 0	'94	72	91'500	1937	6	18 9 0	'98	84	81'375
K	1934	8	16 8 0	1'02	N.G.	49'500	1937	4	16 8 0	1'13	N.G.	66'000
Total columns 3 and 7	..	81	..	..	..	1,388'906	..	94	..	..	..	1,591'061

Part of a team.

(109)

Result of 7÷8 average per person reported 17'15
 Result of 7×16 (to give annas) ÷ 260 to give annas per hour 1'055
 X by 16 to give annas ÷ 234 = annas per hour 16'92
 Decrease 9'67 per cent. (annas per hour) 1'157
 Increase

Category no. 4--Carding machine attendants

N. G.=Information not given.

1				2			3			4			5			6			7		
Name of mill				1939 year or nearest	Number employed	Average earnings	Annas earning per hour	Per centage attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per centage attendance	Total columns nos. 3 and 4 multiplied						
						Rs. s. p.					Rs. s. p.			Rs.							
A	..	..	..	1930	12	11 6 0	.70	92	186.500	1937	16	10 15 5	.75	88	175.416			
B	..	..	..	..	Not working	..	..	..	..	..	6	16 0 0	1.09	N.G.	96.000
C	..	..	..	1933	9	16 11 6	1.08	N.G.	150.468	1937	14	17 7 6	1.19	N.G.	244.532			
D	..	..	..	1981	16	17 14 0	1.10	96	286.000	1937	14	22 8 8	1.54	95	315.487			
E	..	..	..	1929	15	20 14 6	1.29	94.3	318.593	1937	14	22 3 6	1.52	93.3	311.062			
F	..	..	..	..	Not working	..	..	..	..	..	5	11 6 0	.78	N.G.	53.875
G	..	..	..	1929	31	15 10 0	.98	N.G.	484.375	1937	29	15 10 0	1.07	N.G.	453.125			
H	..	..	..	1929	N.G.	17 8 0	1.08	N.G.	..	1937	N.G.	17 8 0	1.20	N.G.	..			
I	..	..	..	1929	26	15 4 3	.94	N.G.	396.906	1937	24	14 14 9	1.02	N.G.	358.124			
J	..	..	..	1930	8	10 14 0	.67	96	87.000	1937	8	10 11 0	.73	94	85.500			
K	..	..	..	1934	9	16 8 0	1.02	N.G.	148.500	1937	9	16 8 0	1.13	N.G.	148.500			
Total columns 3 and 7				..	126	..	..	..	2,008.342	..	139	..	..	..	2,244.601

Part of a team.

Result of 7÷3 average per person reported 15.90
 Result of 7×16 (to give annas) ÷ 260 to give annas per hour978
 X by 16 to give annas ÷ 234=annas per hour 16.15
 Decrease
 Increase 12.88 per cent. (annas per hour) 1.104

Category no. 5—Fly gatherers.

N. G.=Information not given.

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total, columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1930	4	15 6 1	'95	87	61'520	1937	4	15 6 9	1'05	100	61'687 96'000
B .. .. .	..	Not working	..	..	..	..	1937	6	16 0 0	1'09	N.G.	35'938
C	1933	2	16 14 1	1'04	N.G.	33'766	1937	2	17 15 6	1'23	N.G.	135'187
D	1931	10	17 14 0	1'10	95	173'750	1937	6	22 8 6	1'54	95	177'750
E	1929	9	20 14 6	1'29	94'3	189'156	1937	8	23 3 6	1'52	93'3	22 750
F .. .. .	..	Not working	..	..	..	..	1937	2	11 6 0	'78	N.G.	125'000
G	1929	7	15 10 0	'96	N.G.	109'875	1937	8	15 10 0	1'07	N.G.	..
H	1929	N.G.	17 8 0	1'08	N.G.	..	1937	N.G.	17 8 0	1'20	N.G.	84'468
I	1929	5	14 8 8	'83	N.G.	72'081	1937	6	14 1 3	'96	N.G.	39'250
J	1930	2	16 4 0	1'00	100	32'500	1937	2	14 10 0	1'00	100	33'000
K	1934	1	16 8 0	1'02	N.G.	16'520	1937	2	16 8 0	1'13	N.G.	801'030
Total columns no. 3 and 7 ..	..	40	..	..	..	692'592	..	46	..	..	..	..

3, 4 and 5 work in a team.
Part of a team.

(III)

Result of 7 ÷ 3 average per person reported .. 17'31
Result of 7 × 16 (to give annas) ÷ 260 to give annas per hour .. 1'065

× by 16 to give annas ÷ 234 = annas per hour 17'41
Decrease 11'73 per cent. (annas per hour) 1'190
Increase

Category no. 6—Strippers and grinders

N. G.—Information not given.

1	2	3	4	5	6	7	8	9	10	11	12	
Name of mill	1949 year or nearest	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns nos. 8 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1930	18	16 1 10	'99	91	290'082	1987	16	14 8 6	'90	'87	232'500
B .. ..	..	Not working	..	..	..	..	1987	2	20 0 0	1'87	N.G.	40 000
C	1938	10	16 12 8	1'08	N.G.	167'937	1987	10	17 14 0	1 22	N.G.	178'750
D	1931	14	17 14 0	1'10	96	250'250	1987	10	22 8 6	1'54	95	245'312
E	1929	7	20 14 8	1'29	84'8	146'348	1987	7	22 8 6	1'52	93'8	155'581
F .. ..	..	Not working	..	..	..	..	1987	8	11 6 0	'78	N.G.	94'125
G	1929	42	16 4 0	1'00	N.G.	682'500	1987	39	16 4 0	1'11	N.G.	638'750
H	1929	N.G.	19 8 0	1'20	N.G.	..	1987	N.G.	19 8 0	1'88	N.G.	..
I	1929	27	15 1 6	'98	N.G.	407'531	1987	25	14 12 0	1'01	N.G.	306'750
J	1930	9	14 10 0	'90	76	181'625	1987	9	18 15 0	'95	84	125'487
K	1934	9	18 0 0	1'11	N.G.	162'000	1987	9	18 0 0	1'28	N.G.	162'000
Total columns 3 and 7	..	186	..	..	..	2'288'248	..	180	..	..	..	2'166'155

Result of 7+8 average per person reported 16'46 X by 16 to give annas+264=annas per hour .. 16'50
 Result of 7 x 16 (to give annas)+260 to give annas per hour .. 1'018
 Decrease 11'94 per cent. (annas per hour)
 Increase 1'184

Category no. 7—Drawing tenters

N. G.=Information not given.

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns no. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1930	41	80 14 0	1'90	95	1,265'875	1937	59	25 1 9	1'72	84	1,481'458
B .. ..	..	Not working	..	..	..	..	1937	16	28 8 6	1'93	N.G.	451'500
C	1933	28	39 5 11	2'43	N.G.	1,102'437	1937	32	40 15 5	2'80	N.G.	1,311'078
D	1931	48	19 8 3	1'18	90	921'749	1937	36	27 5 6	1'87	98	984'375
E	1929	45	28 6 0	1'81	97'4	1,051'875	1937	6	28 12 0	1'61	98'8	172'781. New.
F .. ..	..	Not working	..	..	..	..	1937	(11) 30	24 4 9	1'36	93'7	728'803. Old.
G	1929	77	25 5 0	1'55	N.G.	1,949'062	1937	9	14 12 8	1'01	N.G.	182'890
H	1929	N.G.	27 7 0	1'69	N.G.	..	1937	86	27 7 0	1'87	N.G.	2,359'625
I	1929	100	19 14 3	1'22	N.G.	1,989'062	1937	N.G.	27 18 0	1'90	N.G.	..
J	1930	21	32 15 0	2'08	98	691'687	1937	82	30 8 9	2'09	N.G.	2,574'848
K	1934	22	34 11 7	2'14	N.G.	768'927	1937	21	25 7 0	1'74	92	534'187
	1937	24	30 7 0	2'08	N.G.	730'500						
Total columns 3 and 7	..	392		..	..	9,735'674		401	..	..	..	11,392'138
Correction	..	To correct Elgin to 10 hours subtract				95'625		To correct Elgin to 9 hours subtract				163'942
Net total	..	..	..	..	..	9,640'049		..	..	..	..	11,228'196

Result of 7÷3 average per person reported
 Result of 7÷16 (to give annas) ÷260 to give annas per hour

.. 25'23
 .. 1'553

× by 16 to give annas ÷284÷annas per hour

.. 28'00

Decrease 28'25 (annas per hour) ..

Increase

.. 1'914

NOTE—Elgin new machine rates are 10 per cent. lower than old machines yet earnings higher. Worked 11 hours in 1929 and 1937.

(113)

Category no. 8—Slubbing tenters

N. G.=Information not given.

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earnings per hour	Percentage attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earnings per hour	Percentage attendance	Total columns nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A .. ..	..	14	30 14 0	1'90	88	432'250	1937	19	24 8 7	1'68	83	466'192
B	1930	Not working	..	..	..	..	1937	7	27 3 0	1'86	N. G.	190'812
C	1938	10	42 14 2	2'64	N. G.	428'859	1937	14	43 6 8	2'97	N. G.	607'891
D	1931	16	26 11 9	1'65	94	427'749	1937	12 3	37 15 9 36 2 0	2'60 2'02	95 94'2	455'812 108'875 488'461
E	1929	18	82 3 0	1'80	95'5	579'976	1937	(11)15	32 3 6	1'80	89'6	New Old
F .. ..	..	Not working	..	..	..	..	1937	8	15 10 11	1'07	N. G.	47'046
G	1929	26	24 14 0	1'53	N. G.	646'710	1937	32	52 12 0	1'55	N. G.	728'000
H	1929	N. G.	27 2 0	1'67	N. G.	..	1937	N. G.	29 8 0	2'02	N. G.	..
I	1929	85	21 4 9	1'91	N. G.	745'390	1937	81	31 3 0	2'13	N. G.	966'812
J	1930	7	32 11 0	2'01	98	228'812	1937	7	25 11 0	1'75	77	179'812
K	1934	8	35 4 0	2'17	N. G.	282'000	1937	9	32 9 0	2'28	N. G.	299'062
Total columns 3 and 7	..	134	..	..	..	3,771'18	..	152	..	..	..	4,526'595
Correction	..	To correct Elgin to 10 hours subtract	..	..	..	52'499	..	To correct Elgin to 9 hours subtract	..	..	..	107'572
Net total	..	..	..	..	..	3,719'696	..	..	..	..	..	4,419'023

Result of 7+3 average per person reported 27'75 X by 16 to give annas ÷ 234=annas per hour 29'07
 Result of 7X16 (to give annas) ÷ 260 to give annas per hour .. 1'707 Decrease 16'46 per cent. (annas per hour)
increase 1'988

Category no. 9—Inter tenters

N.G.=Information not given

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1929	22	26 18 0	1.65	91	589.875	1927	27	20 15 6	1.44	87	556.156
B .. ..	..	Not working	..	..	..	..	1927	14	29 15 8	2.05	N.G.	419.848
C	1928	20	38 4 2	2.35	N.G.	765.256	1927	28	38 1 4	2.60	N.G.	1,066.487
D	1921	22	24 12 9	1.53	85	545.531	1927	(10)22	29 5 0	1.80	96	644.875
E	1929	81	32 0 0	1.79	90	992.000	1927	(11)29	28 10 9	1.60	92.9	981.484 (old)
F .. ..	..	Not working	..	..	..	..	1927	7	12 15 6	.89	N.G.	90.854
G	1929	44	24 6 0	1.50	N.G.	1,072.500	1927	48	22 8 0	1.52	N.G.	954.062
H	1929	N.G.	22 15 0	1.41	N.G.	..	1927	N.G.	24 9 0	1.68	N.G.	..
I	1929	68	20 12 8	1.28	N.G.	1,370.531	1927	56	25 8 6	1.74	N.G.	1,429.750
J	1920	10	29 12 0	1.88	96	297.500	1927	10	22 14 0	1.53	88	228.750
K	1924	18	26 9 0	1.68	N.G.	478.125	1927	18	25 14 9	1.77	N.G.	466.598
Total columns nos. 3 and 7	..	298	..	..	..	6,111.328	..	254	..	..	..	6,698.804
Correction	..	To correct Elgin to 10 hours subtract ..				90.182	To correct Elgin to 9 hours and Tertiles to 9 hours subtract				215.665	
Net Total	..	..	..	..	..	6,021.146	..	..	..	..	..	6,482.639

Result of 7 ÷ 3 average per person reported
 Result of 7 × 16 (to give annas) ÷ 260 to give annas per hour

25.52
1.590

× by 16 to give annas ÷ 234 = annas per hour
 Decrease
 Increase 9.75 per cent. (annas per hour)

25.52
1.745

Category No. 10—Roving tenters

N. G.=Information not given

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per cent age attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per cent age attendance	Total columns nos 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1930	48	24 14 8	1.53	94	1,071.416	1937	44	19 11 0	1.35	98	866.250
B .. .. .	..	Not working	..	..	..	..	1937	10	37 2 8	2.54	N.G.	37.666 Two frames per man,
C	1938	51	85 9 5	2.19	N.G.	1,815.297	1937	64	26 2 10	1.70	N.G.	1,675.406
D	1931	50	21 13 3	1.34	95	1,091.466	1937	(10)50	24 12 0	1.52	95	1,237.500
E	1929	72	25 5 0	1.42	91.8	1,322.500	1937	(11)69	26 13 9	1.50	90.8	1,853.296
F .. .. .	..	Not working	..	..	..	..	1937	14	18 15 0	.95	N.G.	195.125.
G	1929	85	20 8 0	1.26	N.G.	1,742.500	1937	99	18 5 0	1.25	N.G.	1,812.337
H	1929	N.G.	19 0 0	1.17	N.G.	..	1937	N.G.	20 9 0	1.41	N.G.	..
I	1929	117	20 8 3	1.24	N.G.	2,363.765	1937	121	23 0 0	1.57	N.G.	2,733.000
J	1930	20	25 2 0	1.55	88	502.500	1937	24	21 4 0	1.45	82	510.000
K	1934	49	27 8 1	1.69	N.G.	1,347.754	1937	51	19 9 9	1.34	N.G.	1,000.078
Total columns 3 and 7	..	487	..	..	..	11,757.198	..	546	..	..	..	12,805.258
Correction	To correct Elgin to 10 hours subtract					165.682	To correct Textiles to 9 hours and Elgin to 9 hours subtract					460.712
Net total	..					11,591.456						11,844.546

Result of 7 ÷ 3 average per person reported. 23.80
 Result of 7 × 18 (to give annas) ÷ 260 to give annas per hour 1.465

× by 16 to give annas ÷ 234 = annas per hour

21.69

$\frac{\text{Decrease}}{\text{Increase}}$ 1.22 per cent. (annas per hour)

1.483

Lakshmi Ratan provides one boy to help. Paid for by the mill.

Category no. 11—Doffers (carding)

N. G.=Information not given.

1	2	3	4	5	6	7	2	8	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per-centage attend-ance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per-centage attend-ance	Total columns nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1930	60	11 10 8	.72	88	698.437	1937	60	11 4 6	.77	80	676.875
B .. ..	..	..	Not working	..	..	..	1937	8	12 0 0	.82	N.G.	96.000
C	1938	29	11 12 0	.72	N.G.	317.250	1937	24	11 12 0	.80	N.G.	399.500
D	1931	67	13 0 0	.80	90	871.000	1937	50	13 0 0	.89	94	650.000
E	1929	72	13 2 0	.81	93	945.000	1937	69	13 8 6	.90	92	912.098
F .. ..	..	..	Not working	..	..	..	1937	14	11 6 0	.78	N.G.	150.250
G	1929	..	10 10 0	.65	N.G.	Boys	1937	128	10 10 0	.78	N.G.	1,306.875
H	1929	N.G.	12 12 0	.78	N.G.	..	1937	N.G.	12 12 0	.87	N.G.	..
I	1929	185	11 11 6	.72	N.G.	1,582.091	1937	155	10 15 0	.75	N.G.	1,695.812
J	1930	53	10 15 0	.67	80	579.687	1937	53	10 11 0	.73	86	566.437
K	1934	26	12 0 0	.4	N.G.	312.000	1937	26	12 0 0	.82	N.G.	386.000
Total columns 3 and 7	..	440	..	..	..	5,805.405	..	594	..	..	..	6,798.842

Result of 7 ÷ 3 average per person reported 12.06
 Result of 7 × 16 to give annas ÷ 260 to give annas per hour 742

× by 16 to give annas ÷ 284=annas per hour .. 11.45
 Decrease
 Increase 5.52 per cent, (annas per hour) 798

Category no. 12—Doffers (spinning)

.N. G.=Information not given

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per-centage attend-ance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per-centage attend-ance	Total columns nos. 3 and 4 multiplied
A	1980	74	Rs. a. p. 11 13 7	·73	92	Rs. 876·822	1937	116	Rs. a. p. 11 5 8	·78	77	Rs. 1,315·874
B .. ..	..	Not working..	..	..	..	..	1937	24	20 0 0	1·87	N. G.	480·000
C	1933	122	12 1 2	·74	N. G.	1,478·000	1937	166	12 1 11	·89	N. G.	2,011·875
D	1931	80	14 5 6	·88	90	1,147·500	1937	76	15 11 6	1·07	90	1,194·625
E	1929	54	15 10 0	·96	95	843·750	1937	70	16 6 3	1·12	82·3	1,147·848
F .. ..	..	Not working..	..	..	..	..	1937	20	11 6 0	·78	N. G.	227·500
G	1929	94	11 14 0	·78	N. G.	1,116·250	1937	108	11 14 0	·81	N. G.	1,228·125
H	1929	N. G.	12 12 0	·78	N. G.	..	1937	N. G.	12 12 0	·87	N. G.	..
I	1929	135	11 11 6	·72	N. G.	1,532·029	1937	155	10 15 0	·75	N. G.	1,695·812
J	1930	All Mule spinning.	..	..	..	..	1937	..	All Mule spinning.	..	..	..
K	1934	58	12 0 0	·74	N. G.	696·000	1937	60	12 0 0	·82	N. G.	7,30·000
Total column nos. 3 and 7	..	617	..	..	..	7,785·351	..	790	..	..	..	10,015·654

Result of 7 ÷ 8 average per person reported. 12·53
 Result of 7 × 16 (to give annas) ÷ 260 to give annas per hour 771

× by 16 to give annas ÷ 234 = annas per hour 12·67
 Decrease
 Increase 12·45 per cent. (annas per hour) ·867

Category no. 13—Siders (spinning)

N. G.=Information not given.

1	2	3	4	5	6	7	2	8	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per-centage attend-ance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per-centage attend-ance	Total columns nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1980	120	17 18 0	1.09	90	2,187.500	1937	264	20 6 4	1.89	87	5,384.500
B .. ..	..	Not working..	..	..	..	..	1937	69	29 10 0	1.62	N.G.	1,630.125
C	1933	299	18 0 6	1.11	N.G.	5,385.187	1937	370	19 13 8	1.86	N.G.	7,844.813
D	1931	160	15 14 9	.98	87	2,547.499	1937	150	18 18 0	1.29	94	3,366.250
E	1929	108	15 10 0	.96	95	1,687.500	1937	108	21 8 9	1.45	93.2	2,253.811
F .. ..	..	Not working..	..	..	..	..	1937	58	12 6 0	2.85	N.G.	717.750
G	1929	220	16 4 0	1.00	..	3,575.000	..	..	16 4 0	1.11	..	4,682.500
			16 14 0	1.04	N.G.	4,125.000	1937	282	16 14 0	1.15	N.G.	4,758.750
H	1929	N.G.	18 12 (L)	.85	..	..	..	..	19 12 0	.94	..	L—Galter (Boys).
			19 0 (B)	1.17	N.G.	..	1937	N.G.	19 0 (B)	1.30	N.G.	B—Big Piecer.
I	1929	571	18 2 8	1.12	N.G.	10,358.290	1937	434	17 14 3	1.22	N.G.	7,555.624
J .. ..	..	All Mule spin-ning.	..	..	..	..	1937	..	All Mule spin-ning.	..	..	..
K	1934	198	19 2 6	1.18	N.G.	3,792.987	1937	198	19 2 6	1.81	N.G.	3,792.987
Total columns 8 and 7	..	1,676	..	..	..	29,550.663	..	1,958	..	..	..	86,805.985

Result of 7÷3 average per person reported .. 17.63
 Result of 7×16 (to give annas)÷260 to give annas per hour .. 1.085
 × by 16 to give annas÷284 = annas per hour .. 15.84
 Decrease 18.71 per cent. (annas per hour) .. 1.288
 Increase

Category no. 14 - Doubling tenters.

N. G. = Information not given.

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total, columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total, columns nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1930	26	16 8 4	1.02	94	429.541	1937	26	14 10 6	1.00	94	381.062
B .. ..	..	Not working	..	..	..	..	1937	..	Nil	..	..	..
C	1938	Nil	..	..	..	..	1937	..	Nil	..	..	..
D .. ..	..	Nil	..	..	..	..	1937	..	Nil	..	..	..
E	1929	27	16 14 0	1.04	96	455.625	1937	29	17 1 0	1.17	89.5	494.812
F .. ..	..	Not working	..	..	..	..	1937	3	12 7 11	.88	N.G.	37.484
G .. ..	..	Figures not available.	..	..	..	..	1937	17	21 13 0	1.49	N.G.	370.012
H	1929	N.G.	19 10 6	1.21	N.G.	..	1937	N.G.	19 7 6	1.33	N.G.	..
I	1929	15	16 14 3	1.04	N.G.	253.859	1937	14	16 15 6	1.16	N.G.	237.562
J .. ..	..	Nil	..	..	..	..	1937	..	Nil	..	..	..
K	1934	Seldom worked	..	..	..	..	1937	..	Seldom worked	..	..	..
Total columns 3 and 7	..	68	..	..	..	1,133.525	..	69	..	..	..	1,521.732

Result of $7 \div 3$ average per person reported 16.74
 Result of 7×16 (to give annas) \div 260 to give annas per hour .. 1.030
 \times by 16 to give annas \div 234 = annas per hour 17.10
 Decrease 13.50 per cent. (annas per hour) 1.169
 Increase

Category no. 15— Reelers

N. G. = Information not given.

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total, columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns nos 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1930	199	15 5 11	'94	82	3,056*597	1937	193	10 5 5	'71	83	1,995*888 Very little work.
B .. ..	..	..	Not working..	..	..	..	1937	18	12 14 0	'88	N. G.	167*875
C	1933	..	Very few ..	..	..	..	1937	..	Very few.	..	..	..
D	1931	42	22 13 11	1*41	95	960*531	1937	Nil	..	..	..	..
E	1929	188	17 13 0	1*10	83*2	3,348*750	1937	286	16 8 0	1*11	86*1	3,820*250
F .. ..	..	..	Not working..	..	..	..	1937	11	16 4 10	1*12	N. G.	179*822
G	1929	159	12 8	'77	N. G.	1,987*500	1937	215	11 4 0	'77	N. G.	2,418*750 Very little work.
H	1929	..	Not working regularly.	..	..	..	1937	..	Not working regularly.	..	..	..
I	1929	312	11 9 3	'71	N. G.	3,612*374	1937	369	9 8 0	'58	N. G.	3,136*500
J	1930	100	25 14 0	1*60	89	2,587*500	1937	100	18 7 0	1*26	87	1,848*750 Less work.
K	1934	24	21 4 3	1*81	N. G.	510*374	1937	24	22 15 9	1*37	N. G.	551*624
Total columns 3 and 7	..	1,024	..	..	..	16,065*616	..	1,161	..	..	..	14,112*909

Result of 7÷3 average per person reported 15*69

Result of 7×16 (to give annas) ÷ 260 to give annas per hour *966

× by 16 to give annas ÷ 234 = annas per hour .. 12*15

Decrease 18*98 per cent. (annas per hour) .. 0*831
Increase

Category no. 16—Grey winders (old type machine)

N. G. = Information not given.

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Percentage attendance	Total columns nos. 3 and 4 multiplied
			Rs. s. p.			Rs.			Rs. s. p.			Rs.
A	1930	96	12 7 4	76	82	1,195*989	1937	48	13 12 2	94	87	660*489
B .. ..	..	Not working		..	..	..	1937	40	20 18 6	1*48	N. G.	888*750
C	1933	96	19 15 10	1*23	N. G.	1,019*297	1937	100	19 9 10	1*34	N. G.	1,961*422
D	1935	80	18 12 0	1*28	87	582*500	1937	19	27 0 6	1*85	90	513*598
E	1929	80	23 5 6	1*44	82*6	1,867*500	1937	68	23 15 0	1*64	98	1,827*750
F .. ..	..	Not working		..	..	..	1937	35	10 5 0	71	N. G.	860*987
G	1929	125	23 13 0	1*45	N. G.	2,976*562	1937	125	23 5 0	1*59	N. G.	2,914*062
H	1929	N. G.	17 18 0	1*10	N. G.	..	1937	N. G.	17 15 0	1*23	N. G.	..
I	1929	108	21 14 0	1*85	N. G.	2,363*500	1937	120	20 11 0	1*41	N. G.	2,462*500
J .. ..	..	Nil		..	..	..	1937	..	Nil	..	..	..
K	1934	70	16 14 11	1*04	N. G.	1,185*260	1937	72	15 12 2	1*03	N. G.	1,187*374
Total columns 3 and 7	..	605	..	..	..	12,069*618		627	..	..	..	12,491*887
Correction	..	To correct Textiles to 10 hours add		..	..	62*500		..	..	..	..	..
Net total	..	..	..	..	..	12,132*118	1937	..	..	..	..	..

Result of 7÷3 Average per person reported .. 20*05
 Result of 7×16 (to give annas) ÷280 to give annas per hour 1*238

× by 16 to give annas ÷ 284 = annas per hour 19*92
 1*362
 Decrease
 Increase 10*46 per cent. (annas per hour.)

Category no. 17—Grey winders (high speed type machine)

N. G.=Information not given.

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per-centage attend-ance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per-centage attend-ance	Total columns nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1920	None	..	..	..	..	1927	40	15 4 0	1'05	90	611'875
B .. ..	..	Not working	..	..	..	..	1927	..	Nil	..	..	..
C	1923	None	..	..	..	..	1927	70	25 1 2	1'71	N. G.	1,755'000
D	1925	82	2 18 9	1'48	92	667'499	1927	82	27 0 6	1'85	90	865'000
E	1928	None	..	..	..	..	1927	None	..	..	..	..
F .. ..	..	Not working	..	..	..	..	1927	See no. 16	..	..	..	..
G .. ..	..	Nil	..	..	..	..	1927	Nil	..	..	..	..
H	1929	Nil	..	..	..	..	1927	N. G.	19 12 0	1'85	N. G.	..
I	1929	Nil	..	..	..	..	1927	Nil	..	..	..	..
J .. ..	..	None	..	..	..	..	1927	None	..	..	..	..
K	1924	Nil	..	..	..	..	1927	Nil	..	..	..	..
Total columns 3 and 7 ..		82	..	..	..	667'499		122				8,281'875
Correction ..		To correct Textiles to 10 hours add ..				74'167						
Net total ..			..			741'666						

Result of 7÷3 (average per person reported) 23'18
 Result of 7×16 (to give annas)÷260 to give annas per hour 1'426
 × by 16 to give annas ÷ 234 = annas per hour .. 22'76
 Decrease
 Increase 9'12 per cent. (annas per hour) .. 1'558

Category no. 18. Warpens (Old Type Machines). N. G.=Information not given

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns, nos. 3 and 4 multiplied	Years	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns, nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1930	19	35 10 0	2.19	97	676.875	1937	11	44 15 11	3.08	94	494.942
B .. ..	..	Not working..	..	..	..	..	1937	8	40 12 9	2.79	N.G.	326.375
C	1933	28	44 11 1	2.75	N.G.	893.875	1937	18	82 7 11	2.22	N.G.	584.988
D	1935	2	33 6 0	2.28	80	66.750	1937	2	43 2 0	2.95	96	86.250
E	1929	12	48 14 8	3.01	87.2	586.687	1937	18	40 12 0	2.79	98.2	521.750
F .. ..	..	Not working..	..	..	..	..	1937	5	21 6 7	1.46	N.G.	107.057 Old and new types together.
G	1929	26	36 13 0	2.26	N.G.	957.125	1937	29	44 8 0	3.04	N.G.	1,028.500
H	1929	N.G.	51 7 0	3.60	N.G.	..	1937	N.G.	47 1 0	3.22	N.G.	No change in rate.
I	1929	26	40 1 3	2.47	N.G.	1,042.031	1937	26	35 14 2	2.46	N.G.	933.958
J .. ..	..	Nil ..	..	..	..	..	1937	Nil	..	..	..	..
K	1934	1	39 7 7	2.43	N.G.	710.531	1937	16	35 0 1	2.39	N.G.	630.098
Total columns 3 and 7	..	128	..	..	..	4,993.874	..	75	..	..	..	4,716.878
Correction .. ..	..	To increase Textiles from 9 to 10 allow	..	..	..	7.417	..	..	..	..	..	..
Nett Total	..	..	..	..	..	4,941.291	..	..	..	..	..	..

Result of 7 ÷ 3 (average per person reported) 40.17
 Result of 7 × 16 (to give annas) ÷ 260 to give annas per hour 2.472

× by 16 to give annas ÷ 234=annas per hour 38.05.
 Decrease 5.26 per cent. (annas per hour) 2.620.
 Increase

Category no. 19. Warpere (High Speed Type Machine). N. G. = Information not given

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earning	Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied
			Rs. s. p.			Rs.			Rs. s. p.			Rs.
A	1929	Nil	..	..	..	..	1927	2	71 0 11	4'86	100	842'114
B .. .. .	..	Not working	..	..	..	..	1927	Nil	..	..	..	..
C	1929	Nil	..	..	..	..	1927	4	60 4 1	4'12	N.G.	241'081
D	1929	2	84 9 0	2'86	100	69'125	1927	2	47 2 8	3'22	96	94'812
E .. .. .	..	Nil	..	..	..	..	1927	Nil	..	..	..	..
F .. .. .	..	Not working	..	..	..	..	1927	See no. 16	..	..	..	..
G .. .. .	..	Nil	..	..	..	..	1927	Nil	..	..	..	..
H	1929	Nil	..	..	..	..	1927	G.	48 12 0	3'38	N.G.	..
I	1929	Nil	..	..	..	..	1927	Nil	..	..	..	..
J .. .. .	..	Nil	..	..	..	..	1927	Nil	..	..	..	..
K	1929	Nil	..	..	..	..	1927	Nil	..	..	..	..
Total columns 3 and 7	..	2	..	..	..	69'125	..	8	..	..	..	477'457
Correction	..	§ To correct Textiles to 10 hours; add				7'680	..	..	..	..	..	..
Nett Total	..	..	..	..	..	76'805	..	..	..	..	..	..

Result of 7 ÷ 3 (average per person reported) 25'60
 Result of 7 × 16 (to give annas) ÷ 260 to give annas per hour 2'868

× by 16 to give annas ÷ 264 = annas per hour 59'88
 Decrease 4'081
 Increase 72'72 per cent. (annas per hour)

Category no. 20. Warping Creelers. N.G.=Information not given

1				2	3		4	5	6	7		2	3		4	5	6	7	
Name of mill				1929 year or nearest	Number employed		Average earnings	Annas earning per hour	Per-cent. attend-ance	Total columns nos. 3 and 4 multiplied		Year	Number employed		Average earnings	Annas earning per hour	Per-cent. attend-ance	Total columns nos. 3 and 4 multiplied	
							Rs. a. p.			Rs.					Rs. a. p.			Rs.	
A	..	..	..	1980	6		15 2 7	'98	100	90'988		1987	9		16 3 0	1'11	98	145'687	
B	..	..	..	..	Not working		..	..	..	..		1987	2		15 0 0	1'08	N.G.	80'000	
C	..	..	..	1933	24		12 7 5	'77	N.G.	299'078		1987	27		18 11 4	'94	N.G.	870'135	
D	..	..	..	1985	8		15 14 0	1'09	95	127'000		1987	(9) 5		16 10 0	1'14	86	88'195	
E	..	..	..	1929	9		18 3 9	'82	100	19'109		1987	18		15 0 6	1'08	100	196'406	
F	..	..	..	..	Not working		..	..	..	..		1987	5		13 10 2	'98	N.G.	68'177	
G	..	..	..	1929	..		..	..	..	..		1987	..		..	..	..	..
H	..	..	..	1929	N.G.		19 0 0	1'17	N.G.	..		1987	N.G.		18 8 0	1'26	N.G.	..	
I	..	..	..	1929	8		14 11 2	'90	N.G.	117'625		1987	12		15 4 8	1'04	N.G.	188'187	
J	..	..	..	..	Nil		..	..	..	..		1987	Nil		..	..	..	..
K	..	..	..	1934	4		16 8 0	1'02	N.G.	66'000		1937	4		16 8 0	11'3	N.G.	66'000	
Total columns 3 and 7				..	59		..	..	..	819'780		..	77		..	..	..	1,141'707	
Correction				..	To correct Textiles to 10 hours add		..	..	..	14'111		..	..		..	..	..	..
Net Total				..	..		..	..	..	838'891		..	..		..	..	..	..

Result of 7 ÷ 3 (average per person reported) .. 14'14
 Result of 7 × 16 (to give annas) ÷ 260 to give annas per hour .. '87

× by 16 to give annas ÷ 284 = annas per hour .. 14'88
 Decrease ..
 Increase 16'55 per cent. (annas per hour) .. 1'014

Category no. 21. Front Sizers. N.G.=Information not given

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied
			Rs. s. p.			Rs.			Rs. s. p.			Rs.
A	1930	10	35 0 0	2.15	99	850.000	1937	9	38 7 4	2.29	97	801.124
B .. ..	..	Not working	..	..	..	..	1937	4	37 0 0	2.53	N.G.	148.000
C	1938	9	29 4 4	1.80	N.G.	268.422	1937	13	33 13 6	2.31	N.G.	489.922
D	1935	4	27 10 0	1.89	92	110.500	1937	4	28 7 0	1.94	91	113.750
E	1929	12	37 12 3	1.71	92.2	338.187	1937	14	27 14 6	1.91	96.9	390.687
F .. ..	..	Not working	..	..	..	..	1937	2	26 0 0	1.78	N.G.	52.000
G	1929	18	27 7 0	1.69	N.G.	329.250	1937	12	27 7 0	1.88	N.G.	320.250
H	1929	N.G.	30 0 0	1.85	N.G.	..	1937	N.G.	38 0 0	2.26	N.G.	..
I	1929	12	21 14 6	1.35	N.G.	282.875	1937	17	38 0 3	2.26	N.G.	561.265
J .. ..	..	Nil	..	..	..	..	1937	Nil	..	..	..	..
K	1934	7	38 0 0	2.34	N.G.	266.000	1937	8	38 0 0	2.60	N.G.	304.000
Total columns 3 and 7	..	68	..	..	..	1,916.284	..	89	..	..	..	1,749.488
Correction .. ..	..	To increase Textiles to 10 hours add				..	..	..	..	..	..	..
Nett Total	..	..	..	..	..	1,927.511	..	..	..	..	..	..

Result of 7÷3 (average per person reported) 29.20
 Result of 7×16 (to give annas) ÷ 260 to give annas per hour 1.797
 X by 16 to give annas ÷ 284 = annas per hour 3.180
 Decrease 21.08 per cent. (annas per hour) 2.175
 Increase

Category no. 22. Back Sizers. N.G. = Information not given

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total, columns nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1920	11	20 9 4	1.27	95	226.416	1937	9	19 6 0	1.82	95	174.375
B .. ..	..	Not working	..	..	..	..	1937	4	20 0 0	1.87	N.G.	80.000
C	1933	13	21 2 0	1.90	N.G.	274.625	1937	14	21 1 11	1.44	N.G.	295.687
D	1935	4	18 4 6	1.25	85	73.125	1937	4	18 4 6	1.25	90	73.125
E	1929	20	18 14 3	1.16	91.8	377.812	1937	18	19 11 0	1.85	99.8	354.375
F .. ..	..	Not working	..	..	..	..	1937	2	17 12 0	1.21	N.G.	35.500
G	1929	12	19 8 0	1.20	N.G.	234.000	1937	12	19 8 0	1.88	N.G.	234.000
H	1929	N.G.	18 8 0	1.14	N.G.	..	1937	N.G.	21 0 0	1.44	N.G.	..
I	1929	12	16 12 0	1.03	N.G.	201.000	1937	17	23 1 0	1.58	N.G.	392.062
J .. ..	..	Nil	..	..	..	..	1937	Nil	..	..	..	..
K	1934	7	22 0 0	1.85	N.G.	154.000	1937	7	22 0 0	1.50	N.G.	154.000
Total columns 3 and 7	..	79	..	..	..	1,541.058	..	87	..	..	..	1,798.124
Correction..	..	To increase Textiles to 10 hours add				8.125	..	..	..	..	..	..
Nett Total	..	..	..	..	..	1,549.183	..	..	..	..	..	..

Result of 7÷3 (average per person reported) .. 19.61
 Result of 7×16 (to give annas) ÷ 260 to give annas per hour .. 1.206

× by 16 to give annas ÷ 234=annas per hour .. 20.4
 Decrease 16.83 per cent. (annas per hour) .. 1.40
 Increase

Category no. 23. Drawers-in. N.G.=Information not given

1			2	3	4	5	6	7	2			3	4	5	6	7
Name of mill			1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied		
					Rs. s. p.			Rs.			Rs. s. p.			Rs.		
A	..	..	1929	22	24 11 8	1'52	86	548'812	1927	19	31 7 8	2'15	92	598'104
B	..	..	..	Not working	..	..	..	..	1927	10	23 9 6	1'61	N.G.	235'937
C	..	..	1923	18	38 0 11	2'34	N.G.	684'684	1927	19	43 14 5	3'00	N.G.	884'031
D	..	..	1925	6	34 4 0	2'34	95	205'500	1927	8	34 0 6	2'38	96	272'250
E	..	..	1929	22	26 18 0	1'65	92'7	589'875	1927	32	30 1 0	2'08	91'8	982'000
F	..	..	..	Not working	..	..	..	..	1927	8	25 10 11	1'76	N.G.	77'045
G	..	..	1929	36	23 5 0	1'48	N.G.	839'250	1927	24	27 9 0	1'88	N.G.	661'500
H	..	..	1929	N.G.	30 6 0	1'87	N.G.	..	1927	N.G.	27 3 0	1'86	N.G.	..
I	..	..	1929	19	24 12 3	1'52	N.G.	470'546	1927	25	20 9 0	2'02	N.G.	789'000
J	..	..	..	Nil	..	..	..	..	1927	Nil	..	..	..	..
K	..	..	1924	21	22 6 6	1'88	N.G.	470'581	1927	21	25 1 1	1'71	N.G.	526'421
Total, columns 3 and 7			..	144	..	..	..	3,804'498	..	161	..	..	..	4,908'289
Correction			..	To increase Textile to 10 hours add				
Nett Total			..	..	..	..	..	8,227'891	..	..	..	..	..	..

Result of $7 \div 3$ (average per person reported) 26'57
 Result of 7×16 (to give annas) \div 260 to give annas per hour 1'635

\times by 16 to give annas \div 254 = annas per hour 30'47
 Decrease
 Increase 27'46 per cent. (annas per hour) 2'084

Category no. 24. *Reachers. N.G.=Information not given*

1			2	3	4	5	6	7	8	9	10	11	12		
Name of mill			1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per cent attendance	Total columns nos. 8 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per cent attendance	Total columns nos. 8 and 4 multiplied	
					Rs. a. p.			Rs.			Rs. a. p.			Rs.	
A	..	..	1930	24	13 5 5	.82	93	820*125	1937	19	12 14 0	.88	91	244*625
B	..	..	..	Not working	..	..	..	..	1937	10	15 5 6	1*05	N.G.	1 59*497
C	..	..	1932	24	13 1 8	.81	N.G.	818*006	1937	26	13 13 0	.94	N.G.	359*125
D	..	..	1935	6	14 8 8	.99	90	87*093	1937	8	14 4 9	.98	92	114*375
E	..	..	1929	30	11 8 3	.71	86*2	845*468	1937	30	18 11 0	.94	91*1	410*625
F	..	..	..	Not working	..	..	..	..	1937	4	14 10 0	1*00	N.G.	58*500
G	..	..	1929	24	12 8 0	.75	N.G.	292*500	1937	24	12 8 0	.83	N.G.	292*500
H	..	..	1929	N.G.	18 0 0	.80	N.G.	..	1937	N.G.	18 0 0	.89	N.G.	..
I	..	..	1929	23	10 6 8	.64	N.G.	236*984	1937	30	13 5 0	.91	N.G.	399*375
J	..	..	..	Nil	..	..	..	..	1937	Nil	..	..	..	..
K	..	..	1934	21	15 0 0	.92	N.G.	815*000	1937	21	15 0 0	1*03	N.G.	315*000
Total columns 8 and 7			..	152	..	..	..	1,913*076	..	172	..	..	..	2,847*562
Correction			..	To correct Textiles to 10 hours add				..	9*877
Nett total			..	..	..	..	..	1,922*758	..	..	..	..	..	..

Result of 7÷8 (average per person reported)

12*65

Result of 7×16 (to give annas) ÷260 to give annas per hour ..

.778

× by 16 to give annas+234=annas per hour ..

13*56

Decrease 19*92 per cent. (annas per hour. ..

.933.

Category no. 25. Weavers (basis 2 looms per weaver except where mentioned). N.G.=Information not given

1	2	3	4	5	6	7	8	9	10	11	12	
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per cent attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per cent attendance	Total columns nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1930	558	34 15 8	2'08	83	16,983'638	1937	566	85 15 0	2'46	89	20,340'625
B .. ..	..	Not working	..	..	..	..	1937	115	50 5 1	3'44	N.G.	6,989'718 4 looms per weaver.
C	1933	666	36 8 3	2'35	N.G.	25,448'047	1937	(10) 871	38 5 8	2'02	N.G.	33,886'818
D	1935	836	31 10 0	2'16	92	9,677'250	1937	832	38 8 0	2'37	87	12,782'000
E	1929	745	41 0 6	2'52	93	30,568'281	1937	751	39 12 0	2'72	92	29,931'750 1,208 looms
F .. ..	..	Not working	..	..	..	..	1937	200	22 14 0	1'56	N.G.	4,575'000 per 2 looms
G	1929	665	30 5 0	1'57	N.G.	20,157'812	1937	788	33 14 0	2'32	N.G.	24,830'375
H	1929	N.G.	39 12 9	2'45	N.G.	..	1937	N.G.	36 14 6	2'52	N.G.	..
I	1929	723	37 10 0	2'32	N.G.	27,202'875	1937	715	37 9 0	2'57	N.G.	26,857'187
.. ..	..	Nil	..	..	..	..	1937	Nil	..	..	..	..
K	1934	623	39 8 4	2'48	N.G.	24,831'477	1937	600	35 8 9	2'41	N.G.	21,140'625
Total columns 3 and 7	..	4,284	..	..	..	1,58,001'880	..	8,447	..	..	..	1,80,188'588
Correction	..	To correct Textiles to 10 hours add				1,076'250	To correct Textiles to 9 hours subtract				1,2 8'200	
Nett Total	..	..	..	..	..	57,016'630	..	..	..	..	..	1,81,411'788

Result of 7÷3 (average per person reported) 34'67
 Result of 7×16 (to give annas)÷260 to give annas per hour 2'258
 *Laxmi Ratan actual 125 weavers average Rs.50-5-1 paid on the basis of full earnings for two looms plus half the earnings of the other two.

× by 16 to give annas ÷284=annas per hour .. 87'07
 Decrease
 Increase 12'36 per cent. (annas per hour) .. 2'585

Category no. 26. *Folders (Machine). N.G.=Information not given*

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1909 year or nearest	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1980	19	16 0 9	99	95	304.890	1937	21	14 2 4	97	92	399.499
B .. ..	..	Not working	..	..	..	..	1937	10	18 0 0	1.23	N.G.	180.000
C	1933	16	15 0 6	91	N.G.	240.530	1937	22	14 2 9	97	N.G.	453.406
D	1985	6	15 0 0	1.03	95	90.000	1937	6	15 0 0	1.03	95	90.089
E	1929	3	14 6 0	89	100	43.125	1937	6	14 5 9	93	96.2	71.796
F .. ..	..	Not working	..	..	..	..	1937	Nil	..	..	..	..
G	1929	Not known	15 0 0	92	N.G.	..	1937	7	15 0 0	1.03	N.G.	103.000
H	1929	N.G.	18 8 0	1.14	N.G.	..	1937	N.G.	13 6 0	1.26	N.G.	..
I	1929	9	14 1 6	87	N.G.	112.750	1937	13	14 2 3	97	N.G.	183.828
J .. ..	..	Nil	..	..	..	..	1937	Nil	..	..	..	..
K	1984	8 Back 8 Front	17 0 0 10 9 0	1.06 1.17	N.G.	136.001 152.030	1937 1937	8 Back 8 Front	17 0 0 13 0 0	1.16 1.30	N.G.	133.000 152.000
Total columns 3 and 7	..	65	..	..	..	1,079.265	..	118	..	..	..	1,111.29
Correction	..	To increase Textiles to 10 hours add				10.000	..	..	..	..	..	..
Nett Total	..	..	..	..	..	1,089.265	..	..	..	..	..	..

Result of 7÷3 (average per person reported) 16.01
 Result of 7×16 (to give annas) ÷260 to give annas per hour 985
 X by 16 to give annas ÷ 285=annas per hour .. 15.16
 Decrease 5.18 per cent. (annas per hour) .. 1.086
 Increase

Category no. 27. *Folders-hand. N.G.=Information not given*

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1939 year or nearest	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1980	12	16 4 0	1'00	95	195'000	1937	16	16 4 0	1'11	92	260'000
B .. ..	..	Not working..	..	..	..	..	1937	10	19 0 0	1'30	N.G.	180'000
C	1933	9	15 0 6	'98	N.G.	120'250	1937	16	18 10 10	1'14	N.G.	266'766
D	1935	5	15 0 0	1'03	95	75'000	1937	5	15 0 0	1'03	95	75'000
E	1929	67	15 3 6	'94	95	1,010'656	1937	132	16 4 0	1'12	96	2,151'187
F .. ..	..	Not working..	..	..	..	..	1937	4	10 0 0	'68	N.G.	40'000
G .. ..	..	Not knowna	14 6 0 to 15 10 0	'88 '96	N.G.	..	1937	..	14 6 0 to 15 10 0	'98 1'07	N.G.	..
H	1929	N.G.	18 8 0	1'14	N.G.	..	1937	N.G.	18 8 0	1'26	N.G.	..
I	1929	9	16 11 8	1'08	N.G.	150'328	1937	13	18 9 0	1'27	N.G.	241'921
J .. ..	..	Nil	..	..	..	..	1937	Nil	..	..	..	..
K	1934	11	18 14 0	1'16	N.G.	207'625	1937	11	18 14 0	1'29	N.G.	207'625
Total columns 3 and 7	..	112	..	..	..	1,767'859		207	..	..	..	8,432'499
Correction	..	To correct Cawnpore Textiles to 10 hours <i>add</i>	..	..	..	8'333						
Nett Total	..	..	..	..	..	1,776'192						

Result of 7÷8 (average per person reported) 15'83
 Result of 7×16 (to give annas) ÷260 to give annas per hour .. '976

× by 16 to give annas ÷234=annas per hour 18'58
 Decrease 16'19 per cent. (annas per hour) 1'134
 Increase

Category no. 28. Coolies. N. G.-Information not given

1	2	3	4	5	6	7	2	8	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns nos. 8 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	per cent. attendance	Total columns nos. 8 and 4 multiplied
			Rs. a. p.						Rs. a. p.			
A	1930	201	13 15 0 to 19 5 0	.86 to 1.19	85 to 100	29 categories	1937	245	12 10 0 to 17 4 0	.86 to 1.18	83 to 100	29 categories.
B .. ..	..	Not working until 1935.	..	..	..	..	1937	151	12 10 8 to 16 12 0	.86 to 1.15	N.G.	6 ..
C .. ..	..	Particulars not given.	..	..	..	..	1937	..	Particulars not given.	..	..	..
D	1931	83	16 0 0 to 19 0 0	.98 to 1.17	95	4 categories ..	1937	51	14 0 0 to 18 4 0	.96 to 1.25	95	5 categories.
E	1929	180	14 12 0 to 16 0 0	.91 to .98	95 to 97.8	5	1937	538	12 13 0 to 16 14 6	.87 to 1.16	96 to 98	5 ..
F .. ..	..	Not working	..	..	..	..	1937	47	9 12 0 to 14 10 0	.67 to 1.00	N.G.	9 ..
G .. ..	..	..	13 11 0 to 16 4 0	.85 to 1.0)	..	..	1937	..	13 12 0 to 16 4 0	.94 to 1.11	N.G.	..
H	1929	N.G.	18 8 0	1.14	N.G.	..	1937	N.G.	18 8 0	1.26	N.G.	..
I	1929	80	14 6 6	.89	N.G.	Wearing 1152.500	1937	117	14 11 0	1.00	N.G.	Wearing 1716.84.
J	1930	88	14 9 0 to 18 0 0	.89 to 1.11	82 to 100	3 categories ..	1937	94	11 6 0 to 15 14 0	.78 to 1.09	86 to 100	3 categories.
K .. ..	..	Particulars not given.	..	..	..	..	1937	..	Particulars not given	..	..	..

There is so much diversion in the work allotted to cooly la hour that it is not possible to classify on a single sheet of paper .

Result of 7÷3 (average per person report)

Result of 7×16 (to give annas)÷253 to give annas per hour

× by 16 to give annas÷234=annas per hour

Decrease
Increase

(annas per hour)

Category no. 29. Oilmen. N.G.— Information not given

1				2	3			4			5	6	7			2	3			4			5	6	7		
Name of mill				1939 year or nearest	Number employed			Average earnings			Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied			Year	Number employed			Average earnings			Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied		
								Rs. a. p.					Rs.							Rs. a. p.					Rs.		
A	..	..	..	1930	37			17 5 4			1.07	96	641.939			1937	21			15 4 9			1.06	96	321.234		
B	..	..	..	..	Not working			..			..	..	..			1937	9			16 8 0			1.13	N.G.	132.000		
C	..	..	..	1933	6			21 11 4			1.34	N.G.	180.266			1937	6			22 7 7			1.54	N.G.	134.375		
D	..	..	..	1931	4			18 0 0			1.11	95	72.000			1937	6			17 5 0			1.13	96	103.675		
E	..	..	..	1929	17			17 7 6			1.08	93	296.969			1937	18			15 7 6			1.06	23	278.537		
F	..	..	..	..	Not working			..			..	..	..			1937	2			16 4 0			1.11	N.G.	82.500		
G	..	..	..	1929	..			14 6 0			.88	..	..			1937	..			14 6 0			.96	N.G.	..		
H	..	..	..	1929	N.G.			15 10 0			to	to	..			1937	N.G.			15 10 0			1.07	N.G.	..		
I	..	..	..	..	..			19 8 0			1.20	N.G.	..			1937	..			19 8 0			1.39	N.G.	..		
J	..	..	..	1930	6			14 11 0			.90	90	117.500			1937	10			15 9 0			1.06	95	155.625		
K	..	..	..	1934	16			15 0 0			.92	N.G.	240.000			1937	16			16 0 0			1.03	N.G.	240.000		
Total columns 3 and 7				..	88			..			..	..	1498.068			..	87			..			..	..	1,398.546		

Result of 7+3 (average per person reported) 17.02
 Result of 7x16 (to give annas)÷260 to give annas per hour .. 1.047

X by 16 to give annas÷234= annas per hour .. 16.07
 Decrease 4.96 per cent. (annas per hour) .. 1.099
 Increase

Category no. 80. Excepers (Departmental). N.G.=Information not given

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total columns nos. 3 and 5 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1930	13	12 12 0	'75	99	157'625	1937	19	11 10 7	'80	86	221'567
B	..	Not working	..	..	..	..	1937	14	13 12 0	'94	N.G.	192'500
C	1933	6	14 11 5	'91	N.G.	88'281	1937	7	14 15 7	1'02	N.G.	104'313
D	1934	3	15 10 0	'96	90	40'875	1937	12	14 0 0	'96	95	168'000
E	1929	9	14 12 0	'31	97.8	132'750	1937	9	14 12 0	1'01	98	132'750
F	..	Not working	..	..	..	..	1937	1	9 12 0	'87	N.G.	9'750
G	1929	..	10 0 0 to 11 4 0	'62 '69	..	..	1937	..	10 0 0 to 11 4 0	'68 '77	..	..
H	1929	N.G.	12 8 0	'77	N.G.	..	1937	N.G.	12 8 0	'85	N.G.	..
I	1929	37	12 2 6 to 12 6 8	'75 '82	N.G.	449'781 Boys 160'687 Wearing	1937	31 12	12 12 9 to 13 8 0	'87 '92	N.G.	366'708 Boys 162'000 Wearing
J	1930	4	13 12 0	'84	75	55'000	1937	4	13 11 0	'98	85	54'750
K	1934	18	11 0 0	'68	N.G.	193'800	1937	19	13 14 0	'95	N.G.	263'625
Total columns 3 and 7	..	102	..	..	..	1,288'999	..	128	..	..	..	1,705'458

(136)

Result of 7-8 (average per person reported) 13'64

x by 16 to give annas = 234 = annas per hour .. 13'33

Result of 7x16 (to give annas) ÷ 260 to give annas per hour 778

Decrease
Increase 17'32 per cent. (annas per hour) .. '912

Category no. 31. Sweepers (Compound). N. G. = Information not given

1	2	3	4	5	6	7	2	3	4	5	6	7
Name of mill	1929 year or nearest	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total column nos. 3 and 4 multiplied	Year	Number employed	Average earnings	Annas earning per hour	Per cent. attendance	Total column nos. 3 and 4 multiplied
			Rs. a. p.			Rs.			Rs. a. p.			Rs.
A	1980	20	14 1 3	87	99	281'562	1937	19	15 4 1	91	97	251'848
B	..	..	..	..	..	..	1937	5	13 12 0	94	N.G.	55'000
C	1985	3	14 12 10	91	N.G.	44'306	1937	5	14 4 10	98	N.G.	77'500
D	1981	7	11 25 0	74	90	88'562	1937	9	13 11 6	94	90	128'468
E	1929	25	11 1 3	68	95	277'784	1937	31	12 0 0	82	98	972'000
F	..	Not working	..	..	..	..	1937	Not working	..	..	..	..
G	1929	..	8 12 0	54	..	..	1937	..	8 12 0	66	..	..
H	1929	N.G.	10 0 0 14 5 0	62 88	N.G.	..	1937	N.G.	10 0 0 14 0 0	68 98	N.G.	..
I	..	..	..	..	..	..	1937	..	..	..	..	..
J	1980	15	10 1 0	62	79	150'287	..	21	10 14 0	1 72	85	228'975
K	1984	32	13 12 4	85	N.G.	302'958	198	25	12 10 7	97	N.G.	291'213
Total Columns 3 and 4	..	92	..	..	..	1,191'169	..	112	..	..	..	1,393'404

Result of 7÷3 (average per person reported) .. 12'40
 Result of 7×16 (to give annas) ÷ 260 to give annas per hour .. 763

× by 16 to give annas ÷ 294 = annas per hour .. 12'44
 Decrease 11'54 per cent. (annas per hour)
 Increase .. 951

APPENDIX V

Terms of Reference—Our terms of reference include consideration of not only the rates of pay which shall be paid for time and piece-workers in any efficiency scheme which has been or may be introduced by individual mills, but also conditions which should be provided for the various occupations prior to the introduction of any efficiency scheme. Taking these two factors into consideration, we have the following recommendations to make regarding the main occupations in the mills :

Blow Room

Efficiency scheme recommended—We consider that, with very few exceptions, mills should be able to introduce a system of one man per two machines in the case of Exhaust and Lap Machines, Breaker Scutchers, Intermediate Scutchers and Finishing Scutchers. No additional expenditure on equipment would be required before introducing the system recommended, nor would it be essential to make any changes in the cotton used as far as this process is concerned, though it needs to be pointed out that the type of cotton used will necessarily affect the possibilities of introducing schemes in most subsequent processes.

Wages—Where two machines per man are being worked, we recommend that the wage paid should be on a time-work basis and should be consolidated; the minimum rate recommended is Rs.28-7 per month of 26 working days.

Card room—The possibility of increasing the allotment of cards per Stripper and Grinder depends to a very large extent on the quantity of cotton put through the card during the day. With conditions varying so greatly between mill and mill owing to the difference in the average count being spun it is not possible for us to recommend any general system for adoption other than a minimum which should be achievable in any mill. The minimum allotment of cards per Grinder and Stripper and should, in our opinion, be that laid down in the Association's Standardization Scheme, namely, one Grinder and one Stripper per 20/24 cards where patent strippers are not in use.

As regards other occupations in the Card Room, the minimum number of cards allotted to each operative should be as under :

- | | | |
|----------------------------|-----|------------------------------|
| (1) Fly Gatherer | ... | One man for 40/50 cards. |
| (2) Lap Carrier | ... | One man for 27/30 cards. |
| (3) Card Tenter or Can Boy | ... | One man to each preparation. |
| (4) Sweeper | ... | One to 40/50 cards. |

If greater numbers of cards than those specified above are allotted to each operative, the wages paid should be somewhat higher than those specified in the schedule recently adopted by the Association for unrationalized occupations.

Drawing Frames—Efficiency scheme recommended—We consider that a system of two men per three heads of Drawing irrespective of the number of deliveries, could be introduced in all mills for 12s. and over. No further expenditure on equipment would be necessary. As regards cotton, see note under Blow Room.

Wages—The wages recommended for this system of work should be on a piece-work basis, and payment should be made at the rate of 20 per cent. higher than the rate paid per operative on the 3 head system.

It has been brought to our notice that the system of estimating the wages payable to Drawing Frame Tenters varies in different mills, and we are of the opinion that, if and when standardization of wages is attempted in the future, the system of payment of drawing tenters should be made uniform.

Slubbing Department—We do not advocate any change in the present system of one man per machine.

Intermediate Frames—We recommend the continuance of the system of one frame per man. In certain cases where conditions are exceptional, it would be possible to introduce a system of two frames per man with a back tenter, but the saving in such a system is, in our opinion, too small to justify our advocating its general adoption.

ROVING DEPARTMENT

Efficiency scheme recommended—We consider that where rovings are being made for counts 12s. and over, a system of one man per two rovers is possible in all mills without any additional expenditure on equipment. The cotton used should, however, be sufficiently good to reduce sliver breakages to a minimum, as otherwise the possibility of introducing the efficiency system in the spinning department will be affected adversely.

Wages—We recommend that the wages paid for the system of work recommended should be on a piece-work basis with wages for two frames equivalent to two-thirds of the calculated wage, with 35 per cent. Dear Food Allowance for a 10-hour day, and two-thirds of the calculated wage with 40 per cent. Dear Food Allowance, when the 54-hour week is introduced.

Complement of Doffer boys—Though not essentially an efficiency scheme recommendation, we consider it desirable that the attention of all mills should be drawn to the necessity of maintaining their complement of Doffer boys, according to the scales recommended in the original Standardization Scheme of the Association framed in the year 1930, namely—

- 1 per 130 roving spindles when hank roving is $2\frac{1}{2}$ and under;
- 1 per 160 roving spindles when the hank roving is between $2\frac{1}{2}$ and $3\frac{1}{2}$;
- 1 per 240 roving spindles when the hank roving is between $3\frac{1}{2}$ and 4;
- 1 per 300 spindles when the hank roving is between 4 and $4\frac{1}{2}$;
- 1 per 400 spindles when the hank roving is $4\frac{1}{2}$ and over.

Wages to be paid as specified in the recent schedule for unrationalized occupations.

RING SPINNING

Efficiency scheme recommended—In our opinion, it should eventually be possible for practically all mills to introduce a system of two sides per man in the spinning department in all counts above 20s. In certain cases where spinning is exceptionally good, two sides per man is possible on counts 12s. and over. At the same time, we wish to make it clear that it is not possible for us to recommend the compulsory adoption of the two-sides system unless adequate safeguards are introduced which ensure that the spinning qualities of the yarn reach a minimum standard. The only real test of spinning quality is the breakage test. Details as to the number of breakages which take place in mills which have successfully introduced the two-sides system have been supplied to us, and after a study of these particulars, we have reached the conclusion that the introduction of the two-sides system should not ordinarily be attempted by mills unless upon introduction the number of breakages which an operative working on two sides would have to piece up does not exceed 2 per minute. Generally speaking, we consider that where a change over to the two sides system is introduced, better cotton will be necessary.

Wages—The wages to be paid where two or more sides per man are being worked, should, in our opinion, be consolidated and on a time-work basis with a minimum equivalent to $33\frac{1}{2}$ per cent, higher than the minimum

wage laid down in the recent schedule adopted by the Association for single side, that is—

	Warp		Weft	
	Wages per month on single side	Wages per month on double side	Wages per month on single side	Wages per month on double side
	Rs. a.	Rs. a.	Rs. a.	Rs. a.
Up to and including 800 spindles	20 5	27 1	21 2	28 3
301—360	21 2	28 6	21 2½	29 4
361—420	21 15	29 4	22 12	29 5
Over 420 spindles	22 12	30 5	23 9	31 7

WEAVING

Efficiency scheme recommended—We have given very careful consideration to the possibility of making recommendations for the adoption of efficiency systems in weaving, but our final conclusion is that the decision to adopt a 3 or 4-loom system depending as it does on so many different factors, must be left to the discretion of individual mills. The main points to be considered are—

(a) Quality of warp yarn being supplied to the weaver.

(b) In our opinion, no matter what class of goods are being woven, it would be difficult to work an efficiency system in the weaving department unless the number of warp breakages per loom per hour is reduced to a minimum. For a 4-loom system, warp breakages should not, in our opinion, exceed two per loom per hour, and on 3-loom system, 3 per loom per hour.

(c) The next factor to be taken into consideration is the layout of the machinery in the shed. Before any system can be successfully introduced, the layout must be arranged to suit the system; for instance a 3-loom system would be difficult to operate in a shed in which looms are arranged in lines of 4. The starting handles should also be arranged in groups; for example, in a 3-loom system, the starting handle for all the three looms worked by the same man should be in close proximity.

(d) The class of work must be taken into consideration when a decision is being taken on the question of introducing a 3-loom or 4-loom system, for example, in a mill which is producing practically nothing but *dhoties*, the number of shuttle changes which have to be made per hour must be taken into consideration. If complicated headings are the rule, it would be found that in certain instances, the number of shuttle changes on a 4-loom system would be excessive, and might greatly reduce loom efficiency.

(e) A further consideration is the average count of weft being used. If the average count is low, the amount of shuttle changing involved in a 3 or 4-loom system might rule out the possibility of its adoption.

Speaking generally, we would like to lay down that wherever a 4-loom system is found possible after a scientific study by the management concerned, extra help should be given in the way of weft carriers and cloth carriers at the expense of the management.

We would also point out that the introduction of a 3 or 4-loom system is facilitated where coarse weft is being used, by supplying re-wound weft or using longer pirns. Re-wound weft would not, however, always be necessary even in moderately coarse counts if the length of yarn on the pirn is considerably greater than the normal owing to the use of large diameter rings on the spinning frame.

Wages—Subject to the conditions provided being satisfactory for the introduction of an efficiency system in weaving we recommend that the wages paid should be on a piece-work basis with Dear Food Allowances as laid down in the Association's schedule, with additional payment to the weaver equivalent to 50 per cent. of the wages earned on the additional loom, that is to say, where a 3-loom system is worked, wages should be five-sixths of the calculated wage, and on a 4-loom system three-fourths of the calculated wage.

General Observations—We wish to make it clear that our recommendations should not be construed as the last word in standardization. In the peculiar circumstances of the industry we feel that it would hardly be possible for us to do more than prescribe minimum wages, and in any event, standardization in rationalized occupations would be somewhat inconsistent as long as there is no uniformity in the wages paid in unrationalized occupations.