PWD
8363/97

Public Works (1897) Department.

G.O., No. 2266 W

DATED 18 August 97

[Despatch Abstract.]

Rate List Class C. Workshop Machinery & Heavy tools for 1898: Circular from the Director General forwarding the —, Comp. to Dpty Ds of the P.W.Ds.

D.C
1897

[P.W. 25. 5,000—30-11-96.]

Indexed.

[*For General Distribution.*]

Circular No. 5.

FROM

THE DIRECTOR GENERAL OF RAILWAYS,

TO

THE MANAGER, NORTH WESTERN RAILWAY.
THE MANAGER, OUDH AND ROHILKHAND RAILWAY.
THE MANAGER, EASTERN BENGAL STATE RAILWAY.
THE MANAGER, EAST COAST RAILWAY.
THE ENGINEER-IN-CHIEF, KOTRI-ROHRI RAILWAY.
THE ENGINEER-IN-CHIEF, MARI-ATTOCK RAILWAY.
THE ENGINEER-IN-CHIEF, BEZWADA-MADRAS RAILWAY.
THE ENGINEER-IN-CHIEF, RAE BARELI-BENARES RAILWAY.
THE ENGINEER-IN-CHIEF, GODAVERY BRIDGE WORKS.
THE ENGINEER-IN-CHIEF, HURDWAR-DEHRA RAILWAY SURVEY.
THE PORT STOREKEEPER, STATE RAILWAY DEPARTMENT, CALCUTTA.

Rate List, Class C—Workshop Machinery and Heavy Tools for 1896.

Simla, the 3rd July 1897.

SIR,

I have the honour to forward, for information and guidance, a printed statement showing the actual English rates, *free on board* in England, for Class C State railway stores, "Workshop Machinery and Heavy Tools," contracted for by the Stores Department of the India Office during 1896.

2. A table giving the average rates of sea-freight for Class C stores imported from England to the several ports in India for State railways of both gauges during 1894 is prefixed to the Rate List.

3. In order to arrive at the total cost of Class C stores landed in India, an insurance charge of* one-half per cent. on the *free on board* cost *plus* entire sea-freight, should be added in addition to other incidental charges and exchange, which latter should be calculated at the official rate for the year.

I have the honour to be,

SIR,

Your most obedient servant,

F. R. UPCOTT,

Offg. Director General of Railways.

Documents accompanying.

1. Statement showing the average rates per ton for entire sea-freight on Class C stores imported from England to the several ports during 1896.

2. Rate List, Class C—Workshop Machinery and Heavy Tools for 1896.

* For State Railway Stores and Irrigation Works only classed as Imperial. Stores for Provincial and Local funds, and for railways constructed by Native States are charged one per cent. as heretofore.

Enclosure to Director General of Railways' Circular No. 5 of 1897.

RATE LIST.

CLASS C.

WORKSHOP MACHINERY AND HEAVY TOOLS FOR 1896.

G. C. Press, Simla.—No. 191 P. W. D.—16-7-97.—892.

Enclosure to Director General of Railways' Circular No. 5 of 1897.

Statement showing the average rates per ton for entire sea-freight on Class C stores sent out from England to the several Ports in India for State Railways of both gauges during 1896.

Class of Stores.	Kurrachee.	Bombay.	Coconada or Vizagapatam.	Calcutta.	Rangoon.	Remarks.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	
C—Workshop Machinery and Heavy Tools ...	21 3	*... ...	28 2	28 9	†25 0	* *No material for Class C stores was shipped to this port during 1896.* † *50 shillings for Lathes to Rangoon and Calcutta.*

CLASS OF STORES. C.—WORKSHOP MACHINERY AND HEAVY TOOLS.

Contracted for in 1896.

Contract number and date.		Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
				Tons. cwt. qr. lbs.		£ s. d.			
60/460	29-7-96	**Anvils**	Smith's, pike and arch, 2 cwt.	0 2 1 0	Each	2 4 0	Each	Mandalay Kunlon.	
57/234	14-4-96	**Blowers** ...	Allday's patent Climax, No. 6, direct acting forges, complete.	0 1 1 16	Each	8 17 6	Each	Eastern Bengal	
55/8	1-2-96		With duplex direct acting steam engine, No. 3 size, on one cast iron planed bed plate, complete.	2 8 0 0	,,	142 10 0	,,	Eastern Bengal ...	
54/215	24-1-96.	**Cranes, overhead** ...	Material for converting two 30 tons over head cranes from hand power, to rope power.	Not available...	...	147 0 0	Each	Eastern Bengal	

CLASS OF STORES. C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1896.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons. cwt. qr. lbs.		£ s. d.			
60/343 21-7-96	**Engines** ...	Fire, hand, for 16 men, to pump 80 gallons per minute, 110 feet high, worked endways, and supplied with 2 lengths each 10 feet india-rubber suction hose $2\frac{3}{4}$ internal diameter and 5 lengths each 50 feet tanned canvas hose, inlined with india-rubber $2\frac{1}{2}''$ internal diameter, etc.	10 5 0 0	Each	82 10 0	Each	Bezwada Madras.	
57/323 17-4-96	**Gauges**, pressure ...	Hydraulic for 10″ ram, to indicate up to 200 tons on the ram.	0 0 1 17	Each	3 7 6	Each	North-Western.	
54/195 22-1-96	**Gas lighting**, apparatus.	Gas works machinery for lighting the trains with oil gas on Pintschs' patent system, high pressure pipe, 5 trap boxes and filling hoses, complete. Capable of making 6,000 cubic feet of compressed gas per day of 18 hours.	161 15 2 13	Set	1,913 5 0	Set	Eastern Bengal.	
		Plant for producing Pintschs' patent oil gas for carriage lighting and machinery capable of compressing 12,000 cubic feet of gas in 24 hours with 2 benches of retorts, furnaces, condensers, purifying apparatus, tanks and gas holder. Compressing engines, high pressure store holders and piping: trap boxes and filling hose, and all necessary adjuncts complete.	96 8 2 4	,,	2,059 15 0	,,	North-Western.	
56/254 17-3-96	**Grindstones.**—	*Best Ayrshire*, without trough 48″ × 8″ ...	0 10 10 0	Each.	2 15 6	Each.	Burma Railway.	
56/367 26-3-96		*Best Newcastle post*, No. 4 coarse, 5 feet diameter, 8″ thick, suitable for grinding files.	0 17 2 0	,,	3 10 6	,,		
57/278 14-4-96		*Best Newcastle post*, 4′-6″ diameter, 14″ thick with $3\frac{1}{4}''$ square hole in centre.	1 6 3 0	,,	3 16 0	,,	Eastern Bengal.	
57/279 14-4-96		*Yorkshire fine grit*, 2 feet diameter, 4″ thick, with hole $1\frac{1}{2}''$ diameter in the centre.	0 1 2 4	,,	1 7 0	,,	Ditto.	
57/326 18-4-96		*Yorkshire coarse grit*, 66″ diameter, 10″ thick with $2\frac{1}{2}''$ square hole.	1 6 1 0	,,	6 0 0	,,	North Western.	
58/262 13-5-96		*Best Ayrshire*, without trough 48″ × 8″ ...	0 10 0 0	,,	2 15 6	,,	Burma Railway.	
60/145 9-7-96		*Yorkshire medium grit*, 30″ diameter, 5″ wide, without troughs, but with wrought iron spindles and handles and cast steel bearings.	0 3 0 11	,,	1 8 6	,,	Bezwada Madras.	
60/476 30-7-96		*Yorkshire medium grit*, 24″ diameter, 4″ thick, complete with cast iron trough and wrought iron handles.	0 2 3 0	,,	2 5 0	,,	Mandalay Kunlon.	
59/236 19-6-96	**Hammer**, Steam ...	5 cwt. single standard, cylinder 9″ diameter, stroke of piston 21,″ self-acting and hand worked gear: Anvil block separate from framing.	5 7 0 0	Each	158 10 0	Each	Kotri Rohri.	
59/66 8-6-96		20 cwt., cylinder $14\frac{1}{2}''$ diameter, stroke 36 inches, double acting, with base plate, anvil block and pallet complete.	17 18 0 0	,,	328 0 0	,,	Burma.	

CLASS OF STORES. C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for 1896.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on Board. Amount.	Unit.	For what railway.	Remarks.
			Tons. cwt. qr. lbs.		£ s. d.			
60/137 8-7-96	Lathes ...	8 inch centre, self-acting screw-cutting and surfacing gap lathe, to take in 6 feet between the centres	3 1 2 0	Each	140 0 0	Each	Kotri Rohri.	
		8 inch centre, self-acting screw-cutting and surfacing gap lathe, to take with 10 feet bed ...	3 1 2 0	,,	150 0 0	,,	Bezwada Madras.	
63/54 5-10-96		9 inch centre, self-acting, screw-cutting and surfacing gap lathe, with 12 feet bed ...	3 12 1 0	,,	175 0 0	,,	North-Western.	
63/99 13-10-96		Wheel, for turning broad-gauge wheels, 3'9" diameter over the flanges on an axle 8 feet 1¼ inches long	Not shipped ...	...	442 0 0	,,	Eastern Bengal.	
57/190 11-4-96	Lubricators ...	Needle, No. 1, round; ,, 2, flat; Needle, glass; No. 4 flat; ,, 3 round — Lieuvains patent ...	Articles under one cwt. each	...	0-0-2¼	Each.	Eastern Bengal.	
57/90 11-4-96	Lubricators—*contd* ...	Needle No. 1; ,, ,, 2; ,, ,, 3; ,, ,, 4 — Lieuvains patent	Articles under one cwt. each.	...	0 0 2½	Each	North Western.	
	Machines—							
60/11 1-7-96	Bolt, nut and rivet making.	Horsfall's patent for making bolts, nuts and rivets from ⅜" to 1" (inclusive) rising by ⅛" and supplied with a double set of tools.	6 4 3 16	Each	490 0 0	Each	Kotri-Rohri.	
63/180 19-10-96	Brass shaping, single	For shaping square, hexagonal or octagonal parts of taps, cocks, valves and nuts	2 0 0 0	...	74 10 0	,,	Eastern Bengal.	
63/54 5-10-96	Drilling ...	Bench, to drill holes out of the solid up to 1" diameter and 4" deep with a traverse of 1" in 90 revolutions, at a distance of not less than 18" from the edge of the work. Complete in every respect.	1 6 0 0	Each	45 0 0	Each	North Western.	
60/35 2-7-96		Hand, to drill up to ¾" holes, to have a range of feed of 3" and supplied with a fly wheel, spanners and 6 drills of the following sizes:— ⅛", ¼", ⅜", ½", ⅝" and ¾"	0 0 2 25	,,	5 10 0	,,	Bezwada Madras.	
56/151 11-3-96		With flexible shaft (Stowe's system) No. 3 size. Diameter of core ½" capable of drilling with breast drill up to ¼" hole. Complete with counter-shaft round about transfer, breast drill, driving ropes one 50 ft. and two 25 ft. lengths with necessary hooks and eyes, one repair core and 2 sets of Cleveland twist drills ⅛", 5/32", 3/16", 7/32", ¼" diameter. Required specially for drilling holes up the centre of the water space stays of locomotive boilers (for revealing broken stays) without lifting the boilers out of their frames.	0 4 0 0	,,	15 10 0	,,	Burma Railway.	

CLASS OF STORES. C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1896.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machine—*contd.*							
60/137 8-7-96	Drilling ...	Vertical, to drill up to $1\frac{1}{2}$″ diameter and to be suitable for fixing to a bench.	Tons. Cwt. qr. lbs. 1 11 3 0	Each	£ s. d. 90 0 0	Each	Kotri Rohri ...	
		Spare emery discs for :—						
56/383 27-3-96		12″ × $\frac{3}{8}$″ thick with hole in centre $\frac{3}{4}$″ diameter ...			0 5 0	„	Burma Railway.	
57/361 22-4-96		22″ diameter × 3″ thick × 10″ diameter centre hole.			4 8 0	„	Eastern Bengal.	
	Grinding ...		Articles under one cwt. each.	...				
58/226 9-5-96		36″ diameter × $3\frac{3}{8}$″ thick × 24″ hole to suit Thomson Sterne's machine No. 3. For tool grinding.			10 16 8	„	North Western.	*Consolidated discs.*
58/380 A 16-5-96		36″ Diameter × 3″ thickness × 24″ hole ...			3 18 0	„	Oudh and Rohilkhand.	

		Machines—*contd.*						
			Spare emery wheels for:—					
			20″ external diameter, 6″ internal diameter and $2\frac{1}{2}$″ thick.		3 16 6	each		
57/361	22-4-96	Grinding ...	20″ diameter × $2\frac{1}{2}$″ thick × $6\frac{1}{2}$″ hole in the centre		3 15 0	„		
			13″ „ × $1\frac{3}{8}$″ „ × $1\frac{1}{2}$″ „ „ „		0 19 0	„	Eastern Bengal.	
			12″ „ × $\frac{3}{8}$″ „ × 1″ „ „ „		0 4 6	„		
			8″ „ × $1\frac{1}{4}$″ „ × $1\frac{1}{4}$″ „ „ „		0 7 8	„		
			6″ „ × 2″ „ × $1\frac{1}{2}$″ „ „ „		0 9 0	„		
			Spare emery discs of sorts for :—					
			$1\frac{1}{4}$″ diameter × $1\frac{1}{2}$″ thick × $\frac{9}{16}$″ hole ...		0 6 0	Dozen		
			$1\frac{1}{2}$″ „ × $1\frac{1}{2}$″ „ × $\frac{9}{16}$″ „ ...	Articles under one cwt. each	0 7 0	„		
			$1\frac{3}{4}$″ „ × $1\frac{1}{2}$″ „ × $\frac{9}{16}$″ „ ...	...	0 9 0	„		
			$1\frac{3}{4}$″ „ × $2\frac{1}{4}$″ „ × $\frac{11}{16}$″ „ ...		0 12 0	„		
			2″ „ × $1\frac{1}{2}$″ „ × $\frac{9}{16}$″ „ ...		0 11 0	„		
58/226	9-5-96	Grinding and lapping.	$2\frac{1}{4}$″ „ × $1\frac{1}{2}$″ „ × $\frac{9}{16}$″ „ ...		0 14 0	„	North Western.	
			$2\frac{1}{4}$″ „ × $1\frac{1}{2}$″ „ × $\frac{9}{16}$″ „ ...		0 17 0	„		
			$2\frac{3}{4}$″ „ × $1\frac{1}{2}$″ „ × $\frac{9}{16}$″ „ ...		0 19 0	„		
			3″ „ × $1\frac{1}{2}$″ „ × $\frac{9}{16}$″ „ ...		1 1 0	„		
			$3\frac{1}{4}$″ „ × $1\frac{1}{2}$″ „ × $\frac{9}{16}$″ „ ...		1 7 0	„		
			$4\frac{1}{2}$″ „ × $1\frac{1}{2}$″ „ × $\frac{9}{16}$″ „ ...		2 5 0	„		
			9″ „ × $2\frac{1}{2}$″ „ × $2\frac{3}{4}$″ „ ...		9 12 0	„		

Contracted for in 1896.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons. cwt. qr. lbs.		£ s. d.			
	Machines—*contd.*							
59/320 — 25-6-96	Moulding ...	(*a*) To mould axle boxes and to include a cast iron pattern axle box mounted on plates and fitted to the machine, moulding box and bottom plate for moulding the axle boxes. Cast iron patterns of axle box covers mounted on plate, and moulding box for covers, fitted complete. (*b*) To mould axle box bearings (for journals $3\frac{1}{4}'' \times 7''$, $3'' \times 7''$ and $2\frac{3}{4}'' \times 6\frac{5}{16}''$) and to include cast iron patterns mounted on plates for each size of bearings (patterns for each size of bearing to be mounted on a separate plate), moulding box and bottom plate for each size of bearing.	4 11 0 0	For two.	220 0 0	For two.	Burma railway ...	*The weight and value entered include both items (a) and (b).*
59/382 — 29-6-96	Paint mixing ...	Power driven, to mix and grind in one operation 2 cwt. per day.	0 14 0 0	Each	12 10 0	Each	Kotri Rohri ...	
63/164 — 19-10-96	Panel planing and thicknessing.	To plane planks 12″ wide by 6″ thick ...	2 10 0 0	Each	68 0 0	Each	Eastern Bengal ...	
	Machines—*contd.*							
59/227 — 19-6-96	Planing ...	*Spare cutters for* :— Cutters for wood :— $2'' \times 3\frac{1}{2}'' \times \frac{5}{16}''$ ... ... $4\frac{1}{2}'' \times 3\frac{1}{2}'' \times \frac{5}{16}''$ ... ... $6\frac{1}{2}'' \times 4'' \times \frac{5}{16}''$ ... ... $8\frac{1}{2}'' \times 4'' \times \frac{5}{16}''$ ... ... $10\frac{1}{2}'' \times 4'' \times \frac{5}{16}''$ ... ... $12\frac{1}{2}'' \times 4'' \times \frac{5}{16}''$	Articles under one cwt. each.	...	0 1 6 0 3 0 0 3 9 0 4 9 0 6 0 0 7 0	Each „ „ „ „ „	North Western.	
56/152 — 11-3-96		*Spare cutters for* :— To suit "Robinson's" planing and squaring machine, to operate on timber 25 feet by 20 inches.	Articles under one cwt. each.	...	0 8 10	Each	Burma.	
57/255 — 14-4-96	Planing and squaring.	To suit "Ransome's" machine— $2'' \times 4'' \times \frac{5}{16}''$ $4'' \times 4'' \times \frac{5}{16}''$ } for key making ... $5\frac{1}{2}'' \times 4'' \times \frac{5}{16}''$		...	0 6 $1\frac{1}{2}$	„	North Western.	
60/137 — 8-7-96	Punching and shearing.	Capable of punching 1″ holes through $\frac{1}{2}''$ steel plates and shearing $\frac{1}{2}''$ steel plates 15″ from the edge.	5 1 3 0	Each	160 0 0	Each	Kotri Rohri.	

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machine—*contd.*		Tons. cwt. qr. lbs.		£ s. d.			
58/226 — 9-5-96	Saw sharpening ...	*Spare emery discs of sorts:*— 12″ Diameter × ¼″ thickness × ¾″ hole ...	Articles under one cwt. each.	...	1 16 6	Dozen	North-Western.	
		12″ ,, × ⅜″ ,, × ¾″ ,, ...		...	2 15 0	,,		
		12″ ,, × ½″ ,, × ¾″ ,, ...		...	3 13 0	,,		
59/226 — 19-6-96	Screwing ...	"Seller's," for screwing bolts and tapping nuts from ½″ to 1½″ diameter, supplied with one complete set of machine taps and dies, and one set of master taps made to Whitworth's standard sizes, complete in every respect.	3 7 2 0	Each	115 0 0	Each	Kotri Rohri.	
57/360 — 22-4-96	Sewing ...	Heavy, "Singer's" latest improved pattern capable of sewing leather straps up to ⅜″ thick, (26″ machine pattern 85 fitted for steam power)	0 2 5 1	Each	21 0 0	Each	Eastern Bengal.	
54/261 — 4-1-96	Slotting ...	Self acting, range of feed logitudinal, 18″ and transverse 18″, stroke 8″, with revolving table complete with counter shaft, belting, etc., etc.	3 9 2 0	Each	118 0 0	Each	North Western.	
56/302 — 20-3-96	**Machines**—*concld.* Tapping and reaming.	To fit "Stow's" flexible shaft, diameter of core 1″ and to be interchangable with drill press No. 6, spindle to project 2″ beyond bearing, suitable for tapping and reaming water space stay bolt holes in locomotive boilers up to 1¼″ diameter. Size No. 4, geared 5½ to 1.	0 0 2 0	Each.	6 15 0	Each	Oudh and Rohilkhand.	
59/315 — 25-6-96	Testing, oil ...	Thurston's railway pattern, with 3¾″ × 7″ journal, having a maximum total pressure of 5 tons, suitable for testing the lubricating qualities of vegetable and mineral oils used in carriage and wagon axles, locomotives and cylinders.	0 7 1 16	Each	55 0 0	Each	Oudh and Rohilkhand.	
64/384 — 24-11-96	Turning ...	Universal, suitable for all kinds of turning, boring and facing, also preparing and finishing locomotive piston rings with tool holders and tools complete.	Not shipped ...	...	224 0 0	Each	Eastern Bengal.	
63/289 — 28-10-96	**Presses**, hydraulic ...	Apparatus for taking on and pushing off wheels on Locomotive cranks, for hydraulic press supplied on contract No. 5/94 of 1895.	1 11 3 14	Each	85 0 0	Set	East Coast.	
		Filling up Jacks (2)	...	...	1 0 0	Each		
58/406 — 19-5-96	**Pulsometers** ...	*Spare parts of*:— Valves India-rubber.	Articles under one cwt. each.	...	0 4 10⅞	Each	North Western.	
		4¼″ diameter × 1″ hole × ½″ thick ...						
		6¼″ diameter × 1⅛″ hole × ⅝″ thick ...						

CLASS OF STORES. C.—WORKSHOP MACHINERY AND HFAVY TOOLS—*concld.*

Contracted for in 1896.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
			Tons. cwt. qr. lbs.		£ s. d.			
59/200 18-6-96	Saws ...	Circular, for iron sawing machine, 24″ × ¼″ × 3¼″ hole in centre	Under one cwt.	...	2 0 0	Each	North Western.	
57/398 23-4-96	Separator ...	"Sharpe" Patent, for washing foundry refuse.	0 10 2 17	Each	32 0 0	Each	Eastern Bengal.	
56/442 31-3-96	Shaft ...	Flexible "stow" 8 feet long, to suit machine supplied under contract 4⅝ of 7th February 1895 ...	0 3 2 0	Each	9 10 0	Each	Eastern Bengal.	
56/149 11-3-96	Tappers ...	"Paytons" patent, complete, each with drill stock, taps, studding sockets and case, but not including drills, for tapping and studding from ½″ to 1⅛″ (inclusive) rising by ⅛″ of an inch.	0 1 1 18	Each	13 3 0	Each	North Western.	
56/441 31-3-96		Lightning "Peam's" B. size: each with taper and plug taps complete, of the following sizes:—½″, ⅝″, ¾″, ⅞″, 1″ and 1⅛″	0 1 1 0	„	12 5 0	„	Eastern Bengal.	
57/363 22-4-96	Tubes ...	Boiler, iron, Homometal or mild steel, 7′ 3″ × 3″ outside diameter, one end expanded to 3¼″ for 3″ length, 12 S. W. G. for Stationary Engines.	Under one cwt. each.	...	4 2 0	Each	North Western.	

The Secretaries to the Government of Madras, Bombay, Bengal, the North Western Provinces and Oudh, the Punjab and Burma, Public Works Department.
The Secretaries to the Chief Commissioners of the Central Provinces, and Assam, Public Works Department.
The Secretaries to the Residents at Hyderabad and in Mysore, Public Works Department.
The Secretaries to the Agents to the Governor General, Rajputana and Central India and Baluchistan, Public Works Department.
The Superintendent of Port Blair and Chief Commissioner, Andaman and Nicobar Islands.
The Director General of Telegraphs.
The Director General of Military Works.
The Chief Engineer, Kashmir.
The Accountant General, Bengal.
The Consulting Engineers for Railways, Madras, Bombay and Burma.
The Consulting Engineers to the Government of India for railways, Calcutta, Lucknow and Assam.

Copy forwarded to the Local Governments and Administrations and to the Officers noted in the margin for information, with the intimation that all Railway Administrations have been supplied with copies direct.

F. R. UPCOTT,
Offg. Director General of Railways.

To

THE

226fw
18-8-97

602
3363/97

G.C. Press, Simla.—No. 191 P. W. D.—16-7-97.—892

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

Public Works (1897) Department.

CURRENT No. 7096

No. 2266 W. D. 18-8-97

B

Circ

Order

From The Director General of Railways

Communicated to Officers of the M&S Dept:

Cir: No. 5

Dated 3.7.97

Received 20.7.97

Enclosures 1

Spare copies .

23/7/97

SUBJECT.

Rate list; class C - workshop machinery & heavy tools for 1896.

Forwarding a copy of the —

T. Hs

Cir. & form sent with 1 copy of list

Supt Carriages *

C.M. Coaching

E. & L. Loco. Supt. with 1 list

Loco Mgr *

S & I Circle - 7 Copies list

" II " 7 —

" III " — 15 —

" IV " — 7

" V " — 7

" VI " — 7

C. Arch — 3 —

Y C — 3

[P. W. 29. 1,000—22-4-97.]

M.S. 313 22.7.97

BACK PAPERS.

No.	Date.
2960 W.	4-9-96

FURTHER PAPERS.

No.	Date.

Enclosure to Director General of Railways' Circular No. 5 of 1897.

RATE LIST.

CLASS C.

WORKSHOP MACHINERY AND HEAVY TOOLS FOR 1896.

G. C. Press, Simla.—No. 191 P. W. D.—8-7-97.—50.

Secy. 2096/87

Enclosure to Director General of Railways' Circular No. 5 of 1897.

Statement showing the average rates per ton for entire sea-freight on Class C stores sent out from England to the several Ports in India for State Railways of both gauges during 1896.

Class of Stores.	Kurrachee.	Bombay.	Coconada or Vizagapatam.	Calcutta.	Rangoon.	Remarks.
	s. *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	*s.* *d.*	
C—Workshop Machinery and Heavy Tools ...	21 3	*... ...	28 2	28 9	†25 0	* *No material for Class C stores was shipped to this port during 1896.* † *50 shillings for Lathes to Rangoon and Calcutta.*

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Contracted for in 1896.

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				Tons. cwt. qr. lbs.		£ s. d.			
60/460	29-7-96	Anvils	Smith's, pike and arch, 2 cwt.	0 2 1 0	Each	2 4 0	Each	Mandalay Kunlon.	
57/234	14-4-96	Blowers ...	Allday's patent Climax, No. 6, direct acting forges, complete.	0 1 1 16	Each	8 17 6	Each	Eastern Bengal	
55/8	1-2-96		With duplex direct acting steam engine, No. 3 size, on one cast iron planed bed plate, complete.	2 8 0 0	,,	142 10 0	,,	Eastern Bengal ..	
54/215	24-1-96.	Cranes, overhead ...	Material for converting two 30 tons over head cranes from hand power, to rope power.	Not available...	...	147 0 0	Each	Eastern Bengal	

CLASS OF STORES. C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1896.

Contract number and date.		Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
				Tons. cwt. qr. lbs.		£ s. d.			
60/343	21-7-96	Engines ...	Fire, hand, for 16 men, to pump 80 gallons per minute, 110 feet high, worked endways, and supplied with 2 lengths each 10 feet india-rubber suction hose 2¾ internal diameter and 5 lengths each 50 feet tanned canvas hose, inlined with india-rubber 2½″ internal diameter, etc.	10 5 0 0	Each	82 10 0	Each	Bezwada Madras.	
57/323	17-4-96	Gauges, pressure ...	Hydraulic for 10″ ram, to indicate up to 200 tons on the ram.	0 0 1 17	Each	3 7 6	Each	North-Western.	
54/195	22-1-96	Gas lighting, apparatus.	Gas works machinery for lighting the trains with oil gas on Pintschs' patent system, high pressure pipe, 5 trap boxes and filling hoses, complete. Capable of making 6,000 cubic feet of compressed gas per day of 18 hours.	161 15 2 13	Set	1,913 5 0	Set	Eastern Bengal.	
			Plant for producing Pintschs' patent oil gas for carriage lighting and machinery capable of compressing 12,000 cubic feet of gas in 24 hours with 2 benches of retorts, furnaces, condensers, purifying apparatus, tanks and gas holder. Compressing engines, high pressure store holders and piping: trap boxes and filling hose, and all necessary adjuncts complete.	96 8 2 4	,,	2,059 15 0	,,	North-Western.	
56/254	17-3-96	Grindstones.—	*Best Ayrshire*, without trough 48″ × 8″ ...	0 10 10 0	Each.	2 15 6	Each.	Burma Railway.	
56/367	26-3-96		*Best Newcastle post*, No. 4 coarse, 5 feet diameter, 8″ thick, suitable for grinding files.	0 17 2 0	,,	3 10 6	,,		
57/278	14-4-96		*Best Newcastle post*, 4′-6″ diameter, 14″ thick with 3¼″ square hole in centre.	1 6 3 0	,,	3 16 0	,,	Eastern Bengal.	
57/279	14-4-96		*Yorkshire fine grit*, 2 feet diameter, 4″ thick, with hole 1½″ diameter in the centre.	0 1 2 4	,,	1 7 0	,,	Ditto.	
57/326	18-4-96		*Yorkshire coarse grit*, 66″ diameter, 10″ thick with 2½″ square hole.	1 6 1 0	,,	6 0 0	,,	North Western.	
58/262	13-5-96		*Best Ayrshire*, without trough 48″ × 8″ ...	0 10 0 0	,,	2 15 6	,,	Burma Railway.	
60/145	9-7-96		*Yorkshire medium grit*, 30″ diameter, 5″ wide, without troughs, but with wrought iron spindles and handles and cast steel bearings.	0 3 0 11	,,	1 8 6	,,	Bezwada Madras.	
60/476	30-7-96		*Yorkshire medium grit*, 24″ diameter, 4″ thick, complete with cast iron trough and wrought iron handles.	0 2 3 0	,,	2 5 0	,,	Mandalay Kunlon.	
59/236	19-6-96	Hammer, Steam ...	5 cwt. single standard, cylinder 9″ diameter, stroke of piston 21,″ self-acting and hand worked gear: Anvil block separate from framing.	5 7 0 0	Each	158 10 0	Each	Kotri Rohri.	
59/66	8-6-96		20 cwt., cylinder 14½″ diameter, stroke 36 inches, double acting, with base plate, anvil block and pallet complete.	17 18 0 0	,,	328 0 0	,,	Burma.	

CLASS OF STORES. C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for 1896.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on Board. Amount.	Unit.	For what railway.	Remarks.
			Tons. cwt. qr. lbs.		£ s. d.			
60/137 8-7-96	Lathes ...	8 inch centre, self-acting screw-cutting and surfacing gap lathe, to take in 6 feet between the centres	3 1 2 0	Each	140 0 0	Each	Kotri Rohri.	
		8 inch centre, self-acting screw-cutting and surfacing gap lathe, to take with 10 feet bed ...	3 1 2 0	„	150 0 0	„	Bezwada Madras.	
63/54 5-10-96		9 inch centre, self-acting, screw-cutting and surfacing gap lathe, with 12 feet bed ...	3 12 1 0	„	175 0 0	„	North-Western.	
63/99 13-10-96		Wheel, for turning broad-gauge wheels, 3′9″ diameter over the flanges on an axle 8 feet 1¼ inches long	Not shipped ...	...	442 0 0	„	Eastern Bengal.	
57/190 11-4-96	Lubricators ...	Needle, No. 1, round „ 2, flat Needle, glass No. 4 flat „ 3 round } Lieuvains patent ...	Articles under one cwt. each	...	0-0-2¼	Each.	Eastern Bengal.	
57/190 11-4-96	Lubricators—*contd* ...	Needle No. 1 „ „ 2 „ „ 3 „ „ 4 } Lieuvains patent	Articles under one cwt. each.	...	0 0 2½	Each	North Western.	
	Machines—							
60/11 1-7-96	Bolt, nut and rivet making.	Horsfall's patent for making bolts, nuts and rivets from ⅜″ to 1″ (inclusive) rising by ⅛″ and supplied with a double set of tools.	6 4 3 16	Each	490 0 0	Each	Kotri-Rohri.	
63/180 19-10-96	Brass shaping, single	For shaping square, hexagonal or octagonal parts of taps, cocks, valves and nuts	2 0 0 0	...	74 10 0	„	Eastern Bengal.	
63/54 5-10-96		Bench, to drill holes out of the solid up to 1″ diameter and 4″ deep with a traverse of 1″ in 90 revolutions, at a distance of not less than 18′ from the edge of the work. Complete in every respect.	1 6 0 0	Each	45 0 0	Each	North Western.	
60/35 2-7-96		Hand, to drill up to ¾″ holes, to have a range of feed of 3″ and supplied with a fly wheel, spanners and 6 drills of the following sizes:—⅛″, ¼″, ⅜″, ½″, ⅝″ and ¾″	0 0 2 25	„	5 10 0	„	Bezwada Madras.	
56/151 11-3-96	Drilling ...	With flexible shaft (Stowe's system) No. 3 size. Diameter of core ½″ capable of drilling with breast drill up to ¼″ hole. Complete with counter-shaft round about transfer, breast drill, driving ropes one 50 ft. and two 25 ft. lengths with necessary hooks and eyes, one repair core and 2 sets of Cleveland twist drills ⅛″, 5/32″, 3/16″, 7/32″, ¼″ diameter. Required specially for drilling holes up the centre of the water space stays of locomotive boilers (for revealing broken stays) without lifting the boilers out of their frames.	0 4 0 0	„	15 10 0	„	Burma Railway.	

Contracted for in 1896.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machine—*contd.*		Tons. Cwt. qr. lbs.		£ s. d.			
60/137 8-7-96	Drilling ...	Vertical, to drill up to 1½″ diameter and to be suitable for fixing to a bench.	1 11 3 0	Each	90 0 0	Each	Kotri Rohri ...	
		Spare emery discs for :—						
56/383 27-3-96		12″ × ⅜″ thick with hole in centre ¾″ diameter ...			0 5 0	„	Burma Railway.	
57/361 22-4-96		22″ diameter × 3″ thick × 10″ diameter centre hole.			4 8 0	„	Eastern Bengal.	
	Grinding ...		Articles under one cwt. each.	...				
58/226 9-5-96		36″ diameter × 3⅜″ thick × 24″ hole to suit Thomson Sterne's machine No. 3. For tool grinding.			10 16 8	„	North Western.	*Consolidated discs.*
58/380A 16-5-96		36″ Diameter × 3″ thickness × 24″ hole ...			3 18 0	„	Oudh and Rohilkhand.	
	Machines—*contd.*	*Spare emery wheels for*:—						
		20″ external diameter, 6″ internal diameter and 2½″ thick.			3 16 6	each		
		20″ diameter × 2½″ thick × 6½″ hole in the centre			3 15 0	„		
57/361 22-4-96	Grinding ...	13″ „ × 1⅜″ „ × 1½″ „ „ „			0 19 0	„	Eastern Bengal.	
		12″ „ × ⅜″ „ × 1″ „ „ „			0 4 6	„		
		8″ „ × 1½″ „ × 1½″ „ „ „			0 7 8	„		
		6″ „ × 2″ „ × 1½″ „ „ „			0 9 0	„		
		Spare emery discs of sorts for :—						
		1¼″ diameter × 1½″ thick × 9/16″ hole ...			0 6 0	Dozen		
		1½″ „ × 1½″ „ × 9/16″ „ ...			0 7 0	„		
		1¾″ „ × 1½″ „ × 9/16″ „ ...	Articles under one cwt. each	...	0 9 0	„		
		1¾″ „ × 2¼″ „ × 11/16″ „ ...			0 12 0	„		
		2″ „ × 1½″ „ × 9/16″ „ ...			0 11 0	„		
		2¼″ „ × 1½″ „ × 9/16″ „ ...			0 14 0	„	North Western.	
58/226 9-5-96	Grinding and lapping.	2½″ „ × 1½″ „ × 9/16″ „ ...			0 17 0	„		
		2¾″ „ × 1½″ „ × 9/16″ „ ...			0 19 0	„		
		3″ „ × 1½″ „ × 9/16″ „ ...			1 1 0	„		
		3½″ „ × 1½″ „ × 9/16″ „ ...			1 7 0	„		
		4½″ „ × 1½″ „ × 9/16″ „ ...			2 5 0	„		
		9″ „ × 2¼″ „ × 2¾″ „ ...			9 12 0	„		

CLASS OF STORES. C.—WORKSHOP MACHINERY AND HEAVY TOOLS—*contd.*

Contracted for in 1896.

Contract number and date.		Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
				Tons. cwt. qr. lbs.		£ s. d.			
		Machines—*contd.*							
59/320	25-6-96	Moulding ...	(*a*) To mould axle boxes and to include a cast iron pattern axle box mounted on plates and fitted to the machine, moulding box and bottom plate for moulding the axle boxes. Cast iron patterns of axle box covers mounted on plate, and moulding box for covers, fitted complete. (*b*) To mould axle box bearings (for journals $3\frac{1}{4}'' \times 7''$, $3'' \times 7''$ and $2\frac{3}{4}'' \times 6\frac{5}{16}''$) and to include cast iron patterns mounted on plates for each size of bearings (patterns for each size of bearing to be mounted on a separate plate), moulding box and bottom plate for each size of bearing.	4 11 0 0	For two.	220 0 0	For two.	Burma railway ...	*The weight and value entered include both items (a) and (b).*
59/382	29-6-96	Paint mixing ...	Power driven, to mix and grind in one operation 2 cwt. per day.	0 14 0 0	Each	12 10 0	Each	Kotri Rohri ...	
63/164	19-10-96	Panel planing and thicknessing.	To plane planks 12″ wide by 6″ thick ...	2 10 0 0	Each	68 0 0	Each	Eastern Bengal ...	
		Machines—*contd.*							
			Spare cutters for :—						
59/227	19-6-96	Planing ...	Cutters for wood :— $2'' \times 3\frac{1}{2}'' \times \frac{5}{16}''$ ... ... $4\frac{1}{2}'' \times 3\frac{1}{4}'' \times \frac{5}{16}''$ ... ... $6\frac{1}{2}'' \times 4'' \times \frac{5}{16}''$ ... ... $8\frac{1}{2}'' \times 4'' \times \frac{5}{16}''$ ... ... $10\frac{1}{2}'' \times 4'' \times \frac{5}{16}''$ ... ... $12\frac{1}{2}'' \times 4'' \times \frac{5}{16}''$	Articles under one cwt. each.	...	0 1 6 0 3 0 0 3 9 0 4 9 0 6 0 0 7 0	Each „ „ „ „ „	North Western.	
			Spare cutters for :—						
56/152	11-3-96		To suit "Robinson's" planing and squaring machine, to operate on timber 25 feet by 20 inches.		...	0 8 10	Each	Burma.	
57/255	14-4-96	Planing and squaring.	To suit "Ransome's" machine— $2'' \times 4'' \times \frac{5}{16}''$ $4'' \times 4'' \times \frac{5}{16}''$ for key making ... $5\frac{1}{2}'' \times 4'' \times \frac{5}{16}''$	Articles under one cwt. each.	...	0 6 $1\frac{1}{2}$	„	North Western.	
60/137	8-7-96	Punching and shearing.	Capable of punching 1″ holes through $\frac{1}{2}''$ steel plates and shearing $\frac{1}{2}''$ steel plates 15″ from the edge.	5 1 3 0	Each	160 0 0	Each	Kotri Rohri.	

Contracted for in 1896.

Contract number and date.	Articles.	Details.	Approximate gross weight. Weight.	Unit.	Rate—Free on board. Amount.	Unit.	For what railway.	Remarks.
	Machine—*contd.*		Tons. cwt. qr. lbs.		£ s. d.			
		Spare emery discs of sorts:—						
58/226 — 9-5-96	Saw sharpening ...	12″ Diameter × ¼″ thickness × ⅜″ hole ...	Articles under one cwt. each.	...	1 16 6	Dozen	North-Western.	
		12″ ,, × ⅝″ ,, × ⅜″ ,, ...		...	2 15 0	,,		
		12″ ,, × ½″ ,, × ¾″ ,, ...		...	3 13 0	,,		
59/226 — 19-6-96	Screwing ...	"Seller's," for screwing bolts and tapping nuts from ⅛″ to 1½″ diameter, supplied with one complete set of machine taps and dies, and one set of master taps made to Whitworth's standard sizes, complete in every respect.	3 7 2 0	Each	115 0 0	Each	Kotri Rohri.	
57/360 — 22-4-96	Sewing ...	Heavy, "Singer's" latest improved pattern capable of sewing leather straps up to ⅜″ thick, (26″ machine pattern 85 fitted for steam power)	0 2 5 1	Each	21 0 0	Each	Eastern Bengal.	
54/26 — 4-1-96	Slotting ...	Self acting, range of feed logitudinal, 18″ and transverse 18″, stroke 8″, with revolving table complete with counter shaft, belting, etc., etc.	3 9 2 0	Each	118 0 0	Each	North Western.	

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		Machines—*concld.*						
56/302 — 20-3-96	Tapping and reaming.	To fit "Stow's" flexible shaft, diameter of core 1″ and to be interchangable with drill press No. 6, spindle to project 2″ beyond bearing, suitable for tapping and reaming water space stay bolt holes in locomotive boilers up to 1¼″ diameter. Size No. 4, geared 5½ to 1.	0 0 2 0	Each.	6 15 0	Each	Oudh and Rohilkhand.	
59/315 — 25-6-96	Testing, oil ...	Thurston's railway pattern, with 3¾″ × 7″ journal, having a maximum total pressure of 5 tons, suitable for testing the lubricating qualities of vegetable and mineral oils used in carriage and wagon axles, locomotives and cylinders.	0 7 1 16	Each	55 0 0	Each	Oudh and Rohilkhand.	
64/384 — 24-11-96	Turning ...	Universal, suitable for all kinds of turning, boring and facing, also preparing and finishing locomotive piston rings with tool holders and tools complete.	Not shipped ...	...	224 0 0	Each	Eastern Bengal.	
63/289 — 28-10-96	**Presses**, hydraulic ...	Apparatus for taking on and pushing off wheels on Locomotive cranks, for hydraulic press supplied on contract No. 4/5/4 of 1895.	1 11 3 14	Each	85 0 0	Set	East Coast.	
		Filling up Jacks (2)	...	...	1 0 0	Each		
58/406 — 19-5-96	**Pulsometers** ...	*Spare parts of*:—	Articles under one cwt. each.	...	0 4 10⅞	Each	North Western.	
		Valves India-rubber.						
		4¼″ diameter × 1″ hole × ½″ thick ...						
		6¼″ diameter × 1⅛″ hole × ⅝″ thick ...						

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CLASS OF STORES. C.—WORKSHOP MACHINERY AND HFAVY TOOLS—*concld.*

Contracted for in 1896.

Contract number and date.		Articles.	Details.	Approximate gross weight.		Rate—Free on board.		For what railway.	Remarks.
				Weight.	Unit.	Amount.	Unit.		
				Tons. cwt. qr. lbs.		£ s. d.			
59/200	18-6-96	Saws ...	Circular, for iron sawing machine, 24″ × ¼″ × 3¼″ hole in centre	Under one cwt.	...	2 0 0	Each	North Western.	
57/398	23-4-96	Separator ...	"Sharpe" Patent, for washing foundry refuse.	0 10 2 17	Each	32 0 0	Each	Eastern Bengal.	
56/442	31-3-96	Shaft ...	Flexible "stow" 8 feet long, to suit machine supplied under contract $\frac{4}{6}\frac{3}{8}$ of 7th February 1895 ...	0 3 2 0	Each	9 10 0	Each	Eastern Bengal.	
56/149	11-3-96	Tappers ...	"Paytons" patent, complete, each with drill stock, taps, studding sockets and case, but not including drills, for tapping and studding from ½″ to 1⅛″ (inclusive) rising by ⅛″ of an inch.	0 1 1 18	Each	13 3 0	Each	North Western.	
56/441	31-3-96		Lightning "Peam's" B. size: each with taper and plug taps complete, of the following sizes:—½″, ⅝″, ¾″, ⅞″, 1″ and 1⅛″	0 1 1 0	,,	12 5 0	,,	Eastern Bengal.	
57/363	22-4-96	Tubes ...	Boiler, iron, Homometal or mild steel, 7′ 3″ × 3″ outside diameter, one end expanded to 3¼″ for 3″ length, 12 S. W. G. for Stationary Engines.	Under one cwt. each.	...	4 2 0	Each	North Western.	

[*For General Distribution.*]

Circular No. 5.

FROM

THE DIRECTOR GENERAL OF RAILWAYS,

TO

THE MANAGER, NORTH WESTERN RAILWAY.
THE MANAGER, OUDH AND ROHILKHAND RAILWAY.
THE MANAGER, EASTERN BENGAL STATE RAILWAY.
THE MANAGER, EAST COAST RAILWAY.
THE ENGINEER-IN-CHIEF, KOTRI-ROHRI RAILWAY.
THE ENGINEER-IN-CHIEF, MARI-ATTOCK RAILWAY.
THE ENGINEER-IN-CHIEF, BEZWADA-MADRAS RAILWAY.
THE ENGINEER-IN-CHIEF, RAE BARELI-BENARES RAILWAY.
THE ENGINEER-IN-CHIEF, GODAVERY BRIDGE WORKS.
THE ENGINEER-IN-CHIEF, HURDWAR-DEHRA RAILWAY SURVEY.
THE PORT STOREKEEPER, STATE RAILWAY DEPARTMENT, CALCUTTA.

Rate List, Class C—Workshop Machinery and Heavy Tools for 1896.

Simla, the 3rd July 1897.

SIR,

I have the honour to forward, for information and guidance, a printed statement showing the actual English rates, *free on board* in England, for Class C State railway stores, "Workshop Machinery and Heavy Tools," contracted for by the Stores Department of the India Office during 1896.

2. A table giving the average rates of sea-freight for Class C stores imported from England to the several ports in India for State railways of both gauges during 1894 is prefixed to the Rate List.

3. In order to arrive at the total cost of Class C stores landed in India, an insurance charge of* one-half per cent. on the *free on board* cost *plus* entire sea-freight, should be added in addition to other incidental charges and exchange, which latter should be calculated at the official rate for the year.

I have the honour to be,

SIR,

Your most obedient servant,

F. R. UPCOTT,

Offg. Director General of Railways.

Documents accompanying.

1. Statement showing the average rates per ton for entire sea-freight on Class C stores imported from England to the several ports during 1896.

2. Rate List, Class C—Workshop Machinery and Heavy Tools for 1896.

* For State Railway Stores and Irrigation Works only classed as Imperial. Stores for Provincial and Local funds, and for railways constructed by Native States are charged one per cent. as heretofore.

The Secretaries to the Government of Madras, Bombay, Bengal, the North Western Provinces and Oudh, the Punjab and Burma, Public Works Department.
The Secretaries to the Chief Commissioners of the Central Provinces, and Assam, Public Works Department.
The Secretaries to the Residents at Hyderabad and in Mysore, Public Works Department
The Secretaries to the Agents to the Governor General, Rajputana and Central India and Baluchistan, Public Works Department.
The Superintendent of Port Blair and Chief Commissioner, Andaman and Nicobar Islands.
The Director General of Telegraphs.
The Director General of Military Works.
The Chief Engineer, Kashmir.
The Accountant General, Bengal.
The Consulting Engineers for Railways, Madras, Bombay and Burma.
The Consulting Engineers to the Government of India for railways, Calcutta, Lucknow and Assam.

Copy forwarded to the Local Governments and Administrations and to the Officers noted in the margin for information, with the intimation that all Railway Administrations have been supplied with copies direct.

Inspector

Offg. Director General of Railways.

JR

To

THE Secretary to the Government of Madras
Public Works Department.

S Cs with pattern

G. C. Press, Simla.—No. 191 P. W. D.—8-7-97.—50.