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தமிழ்நாடு ஆவணக் காப்பகம்.

தமிழ்நாடு அரசு

(81)

P.W.D. துறை

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மடிக்கவோ கண்டபடி கையாளவோ கூடாது

13. Sheets

ஆவண. கா-1—18,000—15-6-87.

2421
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Enclosure to Director General of Railways' Circular No. 17 of 1891.

RATE LIST.

CLASS C.

WORKSHOP MACHINERY AND HEAVY TOOLS

FOR 1890.

Enclosure to Director General of Railways' Circular No. 17 of 1891.

Statement showing the average rates per ton for entire sea-freight on C Class stores sent out from England to the several ports in India for State Railways of both gauges during 1890-91.

Class of stores.	Port of Bombay.		Port of Calcutta.		Port of Kurrachee.		Port of Rangoon.		Remarks.
	s.	*d.*	*s.*	*d.*	*s.*	*d.*	*s.*	*d.*	
C—Workshop Machinery and Heavy Tools	*20	0	22	6	15	0	28	4	* Rate for 1889. No Workshop Machinery imported in Bombay during 1890-91.

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

Contracted for in 1890.

Contract number and date.		Description. Articles.	Details.	Approximate gross weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on board. Amount. £	s.	d.	Unit.	Remarks.
3389	27-3-90	Anvils.	Blacksmith's, medium size, 6″ broad across the face, weighing 5 cwt.	0	5	0	0	Each	5	15	0	Each.	
4024	24-10-90		Smith's, 2 cwt., each	0	2	0	0	„	2	1	0	„	
„	„		Swage block, 15″ × 15″ × 5″	0	2	0	7	„	1	16	0	„	
„	„		Stands for „	0	1	3	17	„					
4008	23-10-90	Bellows.	Smith's, 36″	0	0	1	14	Each.	8	7	6	Each.	
3939	15-10-90		„ 36″	0	0	1	14	„	8	16	0	„	
„	„		„ 24″	0	0	2	1	„	3	1	0	„	
4055	30-10-90	Blowers.	Root's patent, required for 8 fires	...	...	...	...	...	52	17	6	Each.	
		Crucibles—Plumbago.	Morgan's, Salamander brand—										
3978	21-10-90		No. 10 or 20 lbs.	...	...	...	...	...	0	2	6	Each.	
„	„		„ 20 or 40 „	...	...	...	...	...	0	5	0	„	
3945	15-10-90		„ 25 or 50 „	...	...	...	..	„	0	6	3	„	

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

Contracted for in 1890.

Contract number and date.		Description. Articles.	Details.	Approximate gross weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on board. Amount. £	s.	d.	Unit.	Remarks.
		Crucibles—Plumbago—*contd.*	Morgan's, Salamander brand—*contd.*										
3978	21-10-90		No. 30 or 60 lbs.	...	...	...	...	...	0	7	6	Each.	
3945	15-10-90		„ 40 or 80 „	...	...	...	...	...	0	10	0	„	
„	„		„ 50 or 100 „	...	...	...	...	...	0	12	6	„	
3978	21-10-90		„ 60 or 120 „	...	...	...	...	...	0	15	0	„	
3945	15-10-90		„ 100 or 200 „	...	...	...	...	...	1	5	0	„	
3214	14-2-90	Diamond Holder ...	Plain, with rough diamond firmly set, for turning emery wheels ...	...	...	...	...	...	2	5	0	Each.	
4056	30-10-90	Engines, fire.	Hose, delivery, canvas, unlined, 2½″ internal diameter, in lengths of 100 feet, fitted with couplings, 2″ waterway; for :— ...	...	..	...	...	...	9	2	4	Each.	
4067	31-10-90		Hand, complete, to draw water either by its own cistern or by suction ..	..	...	...	..	...	127	10	0	„	
3233	10-2-90	Forges ...	Vulcan, portable, with hearth plates 23 inches diameter, each forge to be fitted with a Root's blower	...	..	...	...	...	8	8	3	Each.	
3163	15-5-90	Grindstones.	Yorkshire, spare stone, 2′ diameter × 4″ thick, and 1½″ diameter hole in centre	...	...	...	...	...	0	10	0	Each.	
4015	23-10-90		24″ diameter, mounted in a cast-iron trough, fitted with fast and loose pulleys, compound slide rest with index and pointer, &c. ...	...	...	...	...	...	32	10	0	„	

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

Contracted for in 1890.

Contract Number and date.		Description. Articles.	Details	Approximate gross weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on board. Amount. £	s.	d.	Unit.	Remarks.
		Grindstones—*contd.*											
4060	31-10-90		Yorkshire, 48″ × 8″, 3″ square hole	...	...	...	...	...	1	15	0	Each.	
			— 66″ × 10″, 2½″ „	...	...	..	...	...	4	10	0	„	
			72″ × 10″, 3″ „	...	...	...	...	...	6	0	0	„	
4061	31-10-90		Yorkshire, 66″ × 10″, 2½″ „ best Derby coarse grit ...	...	...	...	...	...	7	4	6	„	Suitable for file grinding.
3460	15-5-90	Hearths.	Coppersmith's, brazing, circular, with water tuyere to be made of cast-iron, and to have a flange 10″ diameter × ¾″ thick cast on it, suitable for connection to a blast pipe	...	...	...	..	...	9	17	6	Each.	
„	„		Smith's, circular, small (Allday's)	...	...	...	...	...	27	15	0	„	
3744	28-7-90	Indicators, Steam.	Richard's springs for :—(for taking diagrams) scale $\frac{1}{4\cdot5}$ for 150 lbs. boiler pressure—										
			„ „ „ $\frac{1}{5\cdot6}$ „ 175 „	...	...	...	...	...	0	7	0	Each.	
			„ „ „ $\frac{1}{4\cdot0}$ „ 125 „										
			„ „ „ $\frac{1}{3\cdot3}$ „ 100 „										
			Springs, paper cylinder, for :—	...	...	...	...	...	0	1	0	„	
			Paper metallic, cut into 360 diagram sheets, for—	...	...	...	...	...	0	3	0	Quire.	
			Scales box-wood; for measuring diagrams No. 8, 9 and 10 for— ...	...	...	...	...	...	0	0	9	Each.	

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

Contracted for in 1890.

Contract number and date.		Description. Articles.	Details.	Approximate gross weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on board. Amount. £	s.	d.	Unit.	Remarks.
3408	12-4-90	Lathes, Power, Self-acting.	*Headstocks and fittings for—*										
3376	22-3-90		7″ centre, for heading pointing and chasing on one bed, with three main shaft drums.	4	14	2	0	Each.	386	0	0	Each.	Similar to those supplied on contract C, 387 of 1885, to Eastern Bengal State Railway.
			2′ 10″ centre, double geared, with one universal 4 jaw chuck, 20″ diameter. 2 compound slide rests and saddles ... ... 2 countershafts with brackets, &c., &c., complete, and 2 drums for main shaft	3	14	0	0	Total	276	0	0	Total.	
3773	15-8-90		Saddle and compound slide rest for existing 18″ centre lathe, suitable for turning two journals of an axle at the same time.	1	6	1	0	Each.	90	0	0	Each.	
3619	28-6-90		Gap, 6″ centre screw cutting and surfacing, to take 8′ between the centres. The bed is of sufficient length to admit 8 feet between the centres, and is to be fitted with a gap made to admit work up to 24″ diameter and 6″ wide. The lathe is complete in every respect, including a complete set of tools	1	3	3	1	,,	74	0	0	,,	
3619	28-6-90		Screw cutting and surfacing, 6″ centre. To take 2 feet 9 inches between the centres. The fast headstock is 19″ long and 8″ wide and double geared. The bed is of sufficient length to take in 2 feet 9 inches between the centres, 12″ wide over the V's or 8″ deep, and is supported on three strong C. I. standards 4½″ wide and 30″ across the base. The guide screw is 1¼″ diameter. The lathe is complete in every respect with tools ...	1	3	3	1	,,	85	5	0	,,	

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

Contracted for in 1890.

Contract number and date.		Description. Articles.	Details.	Approximate gross weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on board. Amount. £	s.	d.	Unit.	Remarks.
3619	28-6-90	Lathes, Power, Self-acting.—*contd.*	Screw cutting and surfacing 8″ centre. The fast head stock is 26″ long 10½″ wide and is double geared. The bed is of sufficient length to take in 5′ 9″ between the centres, 15″ wide over the V's and 10″ deep, and is supported on three strong C. I. standards 6″ wide and 33″ across the base. The guide screw is 2 7/16″ diameter. The lathe is complete in every respect and supplied with the necessary tools	...	...	...	...	...	111	10	8	Each.	
3621	28-6-90		Turret, 6″ centre, with 5 feet bed, specially designed for turning, chasing and finishing iron and brass work. The fast headstock has a base of 19″ long and 8″ wide and is double geared. The bed is of sufficient length to take 5 feet between the centres and is not less than 9″ wide over the V's and 8″ deep, and is supported on two strong cast-iron standards. The lathe is complete in every respect, and is supplied with additional parts ...	1	3	0	0	Each.	181	0	0	,,	Cooper's patent.
3773	15-8-90		Turning and boring wheel centres and tyres, specially adapted for turning, boring and facing wheel centres, or boring tyres from 2 feet to 3 feet 9 inches diameter over the flange, for all sizes of tyres within the above range. The lathe is complete in every respect, and is supplied with a countershaft; with brackets, &c., complete, and a main shaft drum of the type usually supplied to the Indian State Railways suitable for driving the lathe from a main shaft, one suitable spanner or ratchet lever for traversing saddle; two right hand and two left hand tools of steel 2¼ inches by 2 inches by 20 inches long is also provided	7	10	0	0	,,	410	0	0	,,	

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

Contracted for in 1890.

Contract number and date.		Description. Articles.	Description. Details.	Approximate gross weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on board. Amount. £	s.	d.	Unit.	Remarks.
3335	12-3-90	Lathes, Power, Self-acting—*contd.*	Wheel, 2′ 6″ centre, metre gauge, adapted to turn without torsional strain of axle, a pair of wheels varying from 2 feet, to 2 feet 6 inches diameter on their own axle or to bore two tyres, or to boss or bore 2 wheels, or to boss or bore a wheel on one face, and to bore a tyre on the other at the same time. The lathe is provided with treble geared headstocks, spindles of Siemens Martin's steel, two saddles moveable longitudinally on bed, and drum 3 feet diameter and 18″ wide on the rim. The lathe is complete in every respect with spare tools	10	12	2	0	Each.	430	0	0	Each.	
3538	5-6-90	Lubricators, Needle.	Round, No. 5	...	...	...	...	...	0	2	3	Doz.	
,,	,,		,, ,, 6	...	...	...	...	...					
,,	,,		,, ,, 8	...	...	...	...	...					
,,	,,		Flat, No. 4	...	...	...	...	...	0	2	6	,,	
,,	,,		,, ,, 7	...	...	...	...	...					
3038	15-10-90		Lienvain's, Nos. 1, 2 and 3	...	...	...	...	...	0	3	0	,,	
3398	31-3-90	Machines, Boring, Cylinder.	Suitable for boring out Cylinders, 2 feet 6½ inches long in the barrel, and 15, 16 and 17 inches internal diameter respectively. Each boring head is supplied with a set of steel cutters, the 15-inch heads are to have 5 cutters, the 16-inch six, and the 17-inch seven cutters each	0	1	13	0	Each.	122	0	0	Each.	

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

Contracted for in 1890.

Contract Number and date.		Description. Articles.	Description. Details.	Approximate gross weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on board. Amount. £	s.	d.	Unit.	Remarks.
3620	28-6-90	Machines, Boring, Cylinder—*concld.*	Portable, for reboring locomotive cylinders in their places, 10 inches to 20 inches diameter and 30 inches long. Each machine is complete in every respect, and is supplied with 4 boring heads, each with 2 sets of steel cutters suitable for cylinders, 10″, 11″, 12″, 13″, 14″, 16″, 18″ and 20″ diameter	1	2	0	0	Each.	65	0	0	Each.	
3621	28-6-90	Machines, Copper, Stay rolling and Centering.	Suitable for rolling and centering copper stays up to 1¼″ diameter and 9 inches long, for locomtive boilers. The machine is complete in every respect, and is supplied with six spare combined drill and fluted countersunks to form the centre in the ends of the stays ...	...	...	...	...	...	130	0	0	Each.	
3419	26-4-90	Machines, Crank-pin, Turning.	Portable, for turning crank pins up to 9½″ long, arranged for outside cranks, and with a packing piece which can be removed when the crank pins are fixed in the wheel. Included are 2 sets of the following accessories, 1 filleting tool right hand, 1 filleting tool right and left hand, 1 turning tool, straight	0	6	2	0	Each.	48	10	0	Each.	
4126	7-11-90		Do. 8 inches long do. do. ...	...	...	...	...	...	54	0	0	,,	
2421	29-4-90	Machine, Drilling, Bench.	Double geared, suitable for being driven by hand and power, and capable of drilling holes out of the solid up to 1½ inches diameter and 9 inches deep, with a traverse of one inch in 90 revolutions. The machine is of sufficient capacity to admit work on the table up to 26″ diameter. The machine is complete in every respect, and is supplied with a complete set of 12 twist drills and sockets from ½ of an inch to 1½ inch, rising by inch	...	...	...	...	...	61	0	0	Each.	

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

Contracted for in 1890.

Contract number and date.		Description. Articles.	Details.	Approximate gross weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on board. Amount. £	s.	d.	Unit.	Remarks.
3619	28-6-90	Machine, Drilling, Vertical.	Double geared, and suitable for drilling holes out of the solid up to 2 inches diameter and 12 inches deep, with a traverse of one inch in 90 revolutions and boring holes up to 8 inches diameter at a distance of 2 feet from the edge of work, 1 foot 3 inches deep on the table. The distance from the upper face of the base plate to the end of the drill spindle is 4′ 8″. The machine is complete in every respect and is supplied with 2 steel boring bars, one 2 feet long and 2 inches diameter, and one about 5′ 6″ long and 2½ inches diameter, the bars to have four cutter "holes in each and a cutter fitted to each hole, one set of 14″ Morse" twist drills and sockets from ⅜″ to 2 inches rising by ⅛″	...	...	...	...	Each.	98	7	2	Each.	
		Machines, Grinding, Emery, of sorts.	Spare discs for—										
3244	14-2-90		24″ diameter × 3″ thick × 5″ hole	0	1	1	4	Each.	6	17	0	Each.	
3863	29-9-90		12″ „ × ½″ „ × ¾″ „	...	...	...	...	...	0	3	2	„	
3639	1-7-90		12″ „ × ⅝″ „ × ¾″ „	...	...	...	...	...	0	5	8	„	
			12″ „ × ¾″ „ × ¾″ „	...	...	...	...	...	0	6	9	„	
			12″ „ × 2″ „ × ¾″ „	...	...	...	...	...	0	18	0	„	
			12″ „ × 2″ „ × 3″ „	...	...	...	...	...	0	18	0	„	
			36″ „ × 3″ „ × 24″ „	...	...	...	...	...	6	15	0	„	
3244	14-2-90	Machines, Grinding and Slide Bar, Emery.	Spare discs for—										
			14″ diameter × 2″ thick and 3½″ hole	0	0	1	7	Each.	1	15	6	Each.	

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

Contracted for in 1890.

Contract Number and date.		Description. Articles.	Details.	Approximate gross weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on board. Amount. £	s.	d.	Unit.	Remarks.
3244	14-2-90	Machines, Grinding, Tool, Emery.	Spare discs for—										
			8½″ diameter × 1¼″ thick and ⅝″ hole	0	0	0	9	Each.	0	10	2	Each.	
			14″ „ × 2″ „ „ 2¼″ „	0	0	1	7	„	1	15	6	„	
			14″ „ × 1⅛″ „ „ 4″ „	0	0	1	4	„	1	12	6	„	
3942	15-10-90	Machine, Grinding, Twist drill, Emery.	Suitable for grinding twist drills from $\frac{3}{16}$″ to 2″ diameter, advancing by 32nd, and from $\frac{9}{16}$″ to 2″, advancing by $\frac{1}{16}$″, with six spare emery discs	2	15	2	0	Each.	63	16	0	Each.	
			Note.—Each machine is supplied with a countershaft with brackets suitable for fixing to a wall; 100 feet of best leather belting, and six laces of approved quality and width, one set of wrought iron case hardened black finished spanners, one Kaye's seamless syphon oil can of approved size, and bolts, nuts and washer plates for fixing each machine to a foundation of 4 feet deep.										
3244	14-2-90		Spare discs for—										
			8½″ diameter × 1¼″ thick and 1$\frac{15}{16}$″ hole	0	0	0	9	„	0	10	2	„	
3419	26-4-90	Machine Key, Grooving, Portable.	For cutting keyways in axles or shafts in their places, the machine is complete in every respect, and is supplied with one set of drills of the following sizes, *viz.*, $\frac{1}{4}$″, $\frac{5}{16}$″, $\frac{3}{8}$″, $\frac{7}{16}$″, $\frac{1}{2}$″, $\frac{9}{16}$″, $\frac{5}{8}$″, $\frac{11}{16}$″, $\frac{3}{4}$″, $\frac{13}{16}$″, $\frac{7}{8}$″, $\frac{15}{16}$″, and 1″ diameter	0	2	3	0	Each.	36	0	0	Each.	

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

Contracted for in 1890.

Contract number and date.		Description. Articles.	Details.	Approximate gross weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on board. Amount. £	s.	d.	Unit.	Remarks.
3567	12-6-90	Machines, Magnetting.	For separating iron and steel filings from brass or copper. To be driven by hand or power, as may be required, and of suitable size for cleaning 10 cwts. of metal borings per day of 8 hours ...	0	5	3	12	Each.	21	0	0	Each.	
3631	28-6-90	Machines, Milling.	Single, suitable for shaping brass nuts and other boiler mountings. The machine is complete in every respect, and is supplied with a swivel vice for fixing irregular work, two nut mandrils and 2 dozen assorted hardened and finished steel cutters	...	...	...	...	...	149	0	0	Each.	
„	„		Treble, suitable for shaping nuts and other articles having any number of sites, and also for general brass finishers' work. The machine is complete in every respect, and is supplied with two nut mandrils and 2 dozen assorted hardened and finished steel cutters ...	...	...	...	...	...	88	10	0	„	
3977	21-10-90	Machines, Paint Mixing.	No. 2, fitted both for hand and steam power with fast and loose pulleys and fly wheel	...	...	...	...	...	7	2	0	Each.	
3618	18-6-90	Machines, Planing, Plate-edge.	Adapted to plane the edges of plates up to 18 feet 6 inches long at one stroke, and to plane the edges of plates of any length by moving the same on the table. The machine is complete in every respect and is supplied with 12 assorted tools of steel, 2 inches square and 18 inches long	12	17	2	0	Each.	260	0	0	Each.	

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

Contracted for in 1890.

Contract number and date.		Description. Articles.	Details.	Approximate gross weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on board. Amount. £	s.	d.	Unit.	Remarks.
4004	23-10-90	Machines, Punching and Shearing and Angle Cutting.	Capable of punching 1 inch holes through 1 inch steel plate, and shearing 1 inch steel plates, 19 inches from the edge of the plates, and cutting angle bars 6″ × 6″ × ¾″ thick to any required length. The machine is complete in every respect and is supplied with 2 sets of knives for the shears, two sets for the angle shears, two sets of steel punches and dies for rivets, 100 ft. best leather belting, and six laces of approved quality, one set of wrought iron case hardened black finished spanners, and one Kaye's seamless syphon oil can of approved size, and bolts and nuts and washer plates for fixing each machine to a foundation of 4′ deep ...	...	...	...	...	...	248	0	0	Each.	
3591	8-10-90	Machine, Sawing, Cold.	Suitable for cutting 75lb. Vignoles section steel rails. The machine is fitted with a drilling arrangement, and six spare drills, and with a compound slide rest made for fixing to a light trolly to be made in India	...	...	...	...	...	46	15	0	Each.	
3618	28-6-90	Machines, Saw, Circular.	Suitable for cutting cold iron or steel up to 6 inches, round or square, or angle, or channel sections, and similar work, the saw is 26 inches in diameter and arranged so that it can be changed easily and quickly. The machine is complete in every respect, and is supplied with a saw sharpening apparatus suitable for fixing to the machine, so that the saw can be sharpened without removal from the spindle, six spare emery wheels and six spare saws, *viz.*, two 16″, two 21″ and two 26″ diameter	3	13	0	17	Each.	156	0	0	Each.	

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

Contracted for in 1890.

Contract Number and date.		Description. Articles.	Details.	Approximate Gross Weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on Board. Amount. £	s.	d.	Unit.	Remarks.
3891	8-10-91	Machines, Saw-sharpening, Cold.	Suitable for sharpening saws of sawing machine, and is arranged so that the teeth can be ground from both sides front and back of each tooth. The machine is supplied with 4 spare discs. ...	...	...	...	...	...	5	15	0	Each.	
3942	15-10-90	Machines, Saw-sharpening, Emery.	For sharpening circular timber saws up to 36" diameter. The machine is to be provided with 3 discs, each 12" diameter and ½" thick, and three discs, each 12" diameter and ¾" thick, made of the best consolidated emery and turned up true on the spindle ...	0	0	0	28	Each.	45	10	0	Each.	
			NOTE.—Each machine to be supplied with 100 feet of best leather belting and six laces of approved quality and width; one set of wrought-iron case hardened black finished spanners; one Kaye's seamless syphon oil can of approved size, and bolts, nuts and washer plates for fixing each machine to a foundation 4 feet deep.										
3432	6-5-90	Machines, Screwing, (Brown's patent).	Single gear, to screw and tap from ¼" to 1" (Brown's patent) ...	2	15	2	0	Each.	97	0	0	Each.	Including tracings and photographs.
			The machine to be supplied with one complete set of taps and dies and one set of master taps made to Whitworth's standard size.										
3419	26-4-90	Machines, Screwing (Seller's patent).	For screwing nuts and tapping bolts, from ½" to 1¼" diameter. The machine is complete in every respect. Included are the following accessories, see below	1	3	0	0	Each.	...	...	...	...	

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

Contracted for in 1890.

Contract Number and date.		Description. Articles.	Details.	Approximate Gross Weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on Board. Amount. £	s.	d.	Unit.	Remarks.
3419 (*contd.*)		Machines, Screwing (Seller's patent)—*contd.*	1 set of machine taps, ½" to 1¼", rising by ½"	...	...	...	...	...	...	...	...	...	
			1 „ discs „ „	...	...	...	...	...	...	...	...	...	
			1 „ master taps „ „	...	...	...	...	...	...	...	...	...	
			1 „ conical Rhymers to suit master taps	...	...	...	...	...	...	...	...	...	
			1 „ tap and nut holder (Seller's patent)	...	...	...	...	...	...	...	...	...	
3825	11-9-90	Machines, Screwing, Power. (Brown's patent.)	Double geared and suitable for screwing bolts and tapping nuts, from ⅜" to 1¼" inclusive by once passing through the discs. The machine is complete in every respect, and is supplied with one set of taps and dies consisting of 8 taps and 8 sets of dies, one set master taps, one set of cone and one set of parallel rimers for the dies, one guide plate bushes, one set of tap holders, one set nut holders, one screw driver and one tommy bar	...	...	...	...	...	111	10	0	Each.	
3684	7-7-90	Machines, Sewing ...	Pearson's patent, A 1, wax thread, for coach and carriage builders, with stand, fittings and spare parts, complete, for driving by foot power	0	10	0	0	Each.	13	10	0	Each.	
3438	8-5-91	Machines, Shaping ...	12" stroke, 8 feet bed, self-acting in all movements, for shaping horizontal, vertical, angular and curvilinear work	6	3	0	0	Each.	287	12	6	Each.	3 sets tracings £6 0 0 6 photos 0 18 0
			Each machine is complete in every respect, and provided with two parallel vices, 2 squaring head stocks, two right angle tool holders, and 12 cutters.										

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

Contracted for in 1890.

Contract number and date.		Description. Articles.	Details.	Approximate gross weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on board. Amount. £	s.	d.	Unit.	Remarks.
3619	2-6-90	Machines, Shaping—*contd.*	12″ vertical stroke. The bed is 4′ 3″ long, 37 inches high, 22 inches across the V's, self-acting in all movements of longitudinal, vertical, angular, and curvilinear motions	...	...	...	...	...	134	4	0	Each.	
			Each machine is complete in every respect and provided with 2 parallel vices, 2 conical mandrils of sizes with spare cones, two headstocks with centres and dividing plate, 1 doz. right hand, 1 doz. left hand, and 1 doz. plain cutting tools of steel, 2 steel tool holders, right and left; with spanners and 6 cutters for each.	...	...	...	...	...	...	...	...	...	
3417	22-4-90	Machines, Tin, working	For punching holes of ¼ to 1 inch diameter in a 20 B. W. G. plate, with complete set of steel punches and dies, 15″ gap	...	2	2	20	Each.	12	10	0	Each.	
3480	6-5-90	Pumps, Boiler-testing, Hydraulic.	Portable, double acting, for testing boilers of locomotive and steam ships, with copper pipes and connections complete	...	...	...	...	...	54	15	0	Each.	
			The pump to have a stroke of 6 inches, and is supplied with a Bourdon's pressure gauge up to 600 lbs. per square inch.										
3407	11-4-90	Pyrometers.	No. 7. A, for testing temperature in blast furnaces, &c., with maximum pointer.	0	1	0	11	Total.	7	0	0	Each.	
			No. 8. for testing temperature in flues, dial 7″, stem 4 feet, to register up to 1,500° Fahrenheit.						4	12	0	,,	

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

Contracted for in 1890.

Contract number and date.		Description. Articles.	Details.	Approximate gross weight. Weight. Tons.	cwt.	qr.	lbs.	Unit.	Rate—Free on board. Amount. £	s.	d.	Unit.	Remarks.
1887	29-1-89	Weighing Machine (Enhardt's patent).	Locomotive, with double dial for weighing from 16 to 35 cwt. and from 35 cwt. to 7½ tons	...	...	...	...	...	141	0	0	Set of 6.	
3244	14-2-98	Wheels, Emery.	Wheels, emery—										
			8¼″ × 1¼″ × ⅝″	...	...	...	...	...	0	9	2	Each.	
			14″ × 1½″ × 4″	...	...	...	...	...	1	9	3	,,	
3484	20-5-90		Spare for 10″ emery grinder	...	...	...	...	...	1	12	6	,,	
			,, 15″ ,, ...	...	...	...	...	...	1	6	6	,,	
			,, 20″ ,, 3″ thick and diameter of hole 10″ ...	...	...	...	...	...	4	1	4	,,	

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[*General Distribution.*]

2421/12

Circular No. 17.

FROM

THE DIRECTOR GENERAL OF RAILWAYS,

TO

THE MANAGER, NORTH WESTERN RAILWAY.
THE MANAGER, OUDH AND ROHILKHAND RAILWAY.
THE SUPERINTENDENT OF WORKS, CHAMAN EXTENSION.
THE SUPERINTENDENT OF WORKS, HYDERABAD-UMERKOT RAILWAY.
THE ENGINEER-IN-CHIEF, EAST COAST RAILWAY.
THE ENGINEER-IN-CHIEF, KISTNA BRIDGE.
THE ENGINEER-IN-CHIEF, MU VALLEY RAILWAY.
THE ENGINEER-IN-CHIEF, MOGHAL SARAI-HOWRAH RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, MOGHAL SARAI-DALTONGUNGE SECTION OF THE MOGHAL SARAI-HOWRAH RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, FRONTIER RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, KASHMIR RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, ZHOB VALLEY RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, JEYPORE-CHUMBAL RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, GOONA-BINA RAILWAY SURVEY.
THE ENGINEER-IN-CHIEF, UJJAIN-BHOPAL RAILWAY SURVEY.
THE PORT STOREKEEPER, STATE RAILWAY DEPARTMENT, CALCUTTA.

Rate List for Class C—Workshop Machinery and Heavy Tools for 1890.

Simla, the 3rd August 1891.

SIR,

I have 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 1890.

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 1890-91 is prefixed to the Rate List.

I have the honour to be,

SIR,

Your most obedient servant,

R. A. SARGEAUNT, Lieut.-Col., R.E.,
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 at the several Ports during 1890-91.
2. Rate List, Class C—Workshop Machinery and Heavy Tools for 1890.

The Secretaries to the Governments of Madras, Bengal, the North-Western Provinces and Oudh, and the Punjab, Public Works Department.
The Secretaries to the Chief Commissioners of the Central Provinces, Burma, and Assam, Public Works Department.
The Secretaries to the Residents, Hyderabad and 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 Accountant General, Public Works Department.
The Comptroller General.
The Accountant General, Bengal.
The Consulting Engineers for Railways, Madras and Bombay.
The Consulting Engineers to the Government of India for Railways, Calcutta, Lucknow, and Central Division.
The Agent and General Manager, Assam Railways and Trading Company, Limited.

2421/12

Copy forwarded to the Local Governments, Administrations and Officers noted in the margin for information.

Lieut.-Col., R.E.,
Offg. Director General of Railways.

22/6/91

To The Joint Secretary to the Government of Madras,
Public Works Department
(Railway Branch)

2421/13

1515/13

FROM

THE DIRECTOR GENERAL

OF RAILWAYS,

TO

Circular No. 17.

Dated Simla, the 3rd August 1891.

Received 7-9-91

Communicated to officers of the Public Works Dept. for information

C.E. for B. Sutlej Circle

S. Engrs. Sutlej Circle

C.A.G. Gaoch Sutlej Circle

Supt. of Works P.P. Sutlej Circle

Store Keeper Sutlej Circle

S.S.

No 2421 dated 9 Sept. 1891

with order

INDIAN STATE RAILWAYS.

Rate List, Class C—"Workshop Machinery and Heavy Tools" for 1890.

G. C. Press, Simla.—No. 495 P. W. D.—13-8-91—1,100.