

Stroudley 0-6-0 C class Goods.

Historical Notes

The first 2 goods locos built by William Stroudley, of the class to be known as the C class 0-6-0's, were nos. 84 & 85 - entering traffic on 3rd & 9th December 1871, respectively. They were replacements for the cancelled order for four 6-coupled goods locos by his predecessor - John Chester Craven - an action taken shortly after taking office at Brighton in 1870. They were fitted initially with the Adams patent safety valves on top of a manhole on the large 4' 5" diameter boiler. Deep 1 1/8" iron frames were used giving the appearance of a powerful new modern loco.

Dimensions:-

Cylinders	17 1/2" x 26"	Grate area:	19 1/2 sq. ft
Coupled Wheels	5' 0"	Working pressure	140 lb. - later 150 lb.
Wheelbase	7' 9" x 7' 6" = 15' 3"	Weight in working order:	
Boiler diameter	4' 5"	Leading Wheels:	13T 0c
Boiler length	10' 4"	Driving Wheels:	14T 12c
Firebox length	6' 2 1/4"	Trailing wheels:	<u>11T 0c</u>
Heating surfaces:		Engine total:	38T 12c
tubes	1334 sq. ft	Tender 1,600 gall	<u>24T 18c</u>
firebox	<u>102 sq. ft</u>	Total	63T 10c
Total	<u>1436 sq. ft</u>		

The use of Adams safety valves proved troublesome and they were replaced with Salter spring balance valves - No. 84 in March 1876, and no. 85 in January 1877. The latter had been renumbered to 83 in June 1873.

Exploratory trials were run by Stroudley on these 2 engines over a long period of time - as was his practice - and various deficiencies in blast pipes, tubes, crank axles and, more importantly, boiler circulation - were duly discovered and, where possible, addressed.

It has to be said that history records the issue of poor boiler circulation, and consequent poor steaming, as having dogged both this and the C1 class all their lives. The problem is most graphically illustrated by stories of crews uncoupling their engines while waiting at signals for the road, after a spell of heavy work - trying to use up surplus steam for fear of a boiler explosion. Apparently there was ample steam while stationary, but insufficient when really needed under arduous working conditions.

Despite these failings, well documented in Bradley Vol. 1., the rest of the class was built as follows:

Nos. 85-96 by Kitsons, and 77-84 at Brighton Works.

The first two engines received the low-sided version of the unique outside frame tender, whilst the rest received ones with higher sides. Those attached to Nos. 77 & 78 contained 1,650 gallons, while those attached to nos. 79-82, 85-96 contained 1,860 gallons.

The nickname of 'Jumbo' appears to have been given first to this class, as it was prone to wallow over weak sections of track, but also seems to have automatically transferred to the C1 class as well.

Boilers

Whilst most classes of Brighton loco received new boilers when wear demanded, it appears that the C classes, like the G Singles never did. There are records of approximately two replacement fireboxes during their lives and much experimenting with varying types and numbers of tubes, but never the whole deal.

Brakes

Surprisingly, no provision was made from new for braking as far as the engine was concerned - those on the tender and guard's van being relied upon to stop the huge, though slow-moving tonnage of goods trains.

Finally, commencing in January 1884, the Westinghouse system was fitted to the following favoured locos: 406/8/9, 410/11/13/15/18/19/20

Even then the brakes acted only on the driving and trailing wheels. They were of the clasp-type, as used on the Gladstone class, and all of the Richmond class excepting 'Richmond' itself (which had a variant of the system), and the G singles.

Sheds when new:

- 77/8/9, 81/2/3/4, 93 went to Brighton - some of which were loaned to Newhaven for the heavy Willow Walk goods trains
- 85/6/7, 90/2/4 went to New Cross
- 89, 91/5 went to Battersea
- 80 to Portsmouth
- 88 to Eastbourne
- 96 to Hastings

Later Shed allocations:

	1896	1900/01
Brighton	401/6/8/15/16/17/18	407/13
New Cross	409/10/11/19	
Newhaven	402/3/5	404
Hastings	412/4	
Littlehampton	404	
Portsmouth	407/13	
Horsham	420	

Numbering & withdrawal.

No.	previous	Withdrawn	No.	previous	Withdrawn
			410	86	11/1902
401	77	6/1902	411	87	11/1902
402	78	6/1902	412	88	6/1902
403	79	6/1902	413	89	12/1903
404	80	1/1903	414	90	12/1903
405	81	6/1902	415	91	7/1904
406	82	3/1903	416	92	6/1902
407	83	8/1901	417	93	11/1902
408	84	1/1902	418	94	7/1904
409	85	11/1902	419	95	7/1904
			420	96	12/1904

C1 Class:

Despite the many shortcomings of the C class, and the fact that the Richmond boiler would have provided a vastly better supply of steam, Stroudley made some adjustments to the C boiler dimensions, cylinder diameter and the length of the framing, and produced what amounted to another 12 similar locos. They had screw reverser, as opposed to lever, and brakes for all engines from new. Outside frame tenders were again provided, as they had proved rather more rough riding at speed than was acceptable for faster passenger work. It appears the class was no real improvement on the C's.

They were built in two batches, nos. 421-426 from 1882-4, and 427-432 from 1884-7. The first batch had the reverser lever inside the boiler lagging, and the second batch had it outside. Other details appear to have been identical.

Dimensions:

Cylinders:	18½" x 26"	Total	<u>1413 sq.</u>
Coupled wheels	5' 0"	<u>ft.</u>	
Wheelbase	7' 9" x 7' 6" =	Grate area:	20.9 sq. ft
15' 3"		Working pressure	150 lb. ft ²
Boiler diameter	4' 8"	Weight in working order:	
Boiler length	10' 2"	Leading Wheels:	13T 14c
Firebox length	6' 8¼"	Driving Wheels:	14T 0c
Heating surfaces:		Trailing wheels:	<u>12T 13c</u>
tubes	1312 sq. ft	Engine total:	40T 7c
firebox	<u>101 sq. ft</u>		

Sheds from new:

Brighton:	421	
Battersea	422/6	427-30

New Cross	423/4/5	431/2
1900 Allocation		
Brighton:	421/2	[421 usually loaned to Newhaven, [422 loaned to Hastings
Battersea	427/8/9/30	
New Cross	423/4/5/31/32	
Newhaven	426	

Withdrawals

421	1/1911	425	8/1907	429	8/1907
422	1/1911	426	8/1907	430	9/1924 **
423	11/1908 *	427	3/1911	431	8/1907
424	11/1908	428	11/1920 **	432	12/1910 *?

* No 423 latterly ran with a standard inside frame tender

** Nos. 428 and 430 possibly the only ones to receive long hinged smokebox doors and Marsh goods black livery.

*? possibly received black livery, though unlikely.

The tenders were said to be of 2,550 gallons capacity, making them larger still than those of the C's. Certainly there were a few visible variations - namely in the matter of steam dome size, filler caps, rear tender steps. All these are included in the kit.