

New 4-6-2 Locomotives, Southern Railway

SINCE the introduction in 1941 of Mr. Bulleid's first Southern Railway "Merchant Navy" class Pacific, considerable experience has been gained with these somewhat unorthodox engines; and the satisfaction felt at their performance has been sufficient to warrant close adherence to the 1941 model in the new series now under construction.

Built primarily for work on the restricted routes west of Exeter, these "West Country" locomotives had to be made much lighter than the "Merchant Navy" class, to work over lines where even "Lord Nelson" and other heavy engines are not allowed. Nevertheless, they had to be built with a sufficient capacity to enable them to work either passenger or freight trains over any part of the main lines.

Below are the leading dimensions of the "West Country" locomotives:—

Cylinders (3), dia.	16½ in.
" stroke	24 in.
Piston valves, dia.	10 in.
" max. travel	6½ in.
Wheels, coupled, dia.	6 ft. 2 in.
" leading bogie	3 ft. 1 in.
" trailing truck	3 ft. 1 in.
Wheel-base, coupled	14 ft. 9 in.
" total, engine	35 ft. 6 in.
Boiler, dia., max. outside	6 ft. 3½ in.
" length between tube plates	17 ft.
" working pressure	280 lb. per sq. in.
" centre from rail	9 ft. 7½ in.
Heating surfaces:—	
Total evaporative (firebox, with 32 5½-in. flues and 112 2½-in tubes)	2,122 sq. ft.
Superheater	545 sq. ft.
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Total combined	2,667 sq. ft.
Firebox volume	242 cu. ft.
Grate area	38.25 sq. ft.
Weight in working order:—	
Engine	86 tons 0 cwt.
Tender	42 tons 12 cwt.
Total weight of engine and tender in working order	128 tons 12 cwt.
Tractive effort at 85 per cent. boiler pressure	31,000 lb.
Water capacity of tender	4,500 gal.
Coal capacity of tender	5 tons

Many of the features which formed striking novelties in the "Merchant Navy" engines are perpetuated in the "West Country" class. Among these may be mentioned the air-smoothed external casing, the Bulleid patent valve gear, the "B.F.B." cast-steel driving-wheel centres, and the clasp brakes, as well as thermic syphons in the firebox and automatic lubrication of the motion. The cab, though slightly smaller, is also similar.

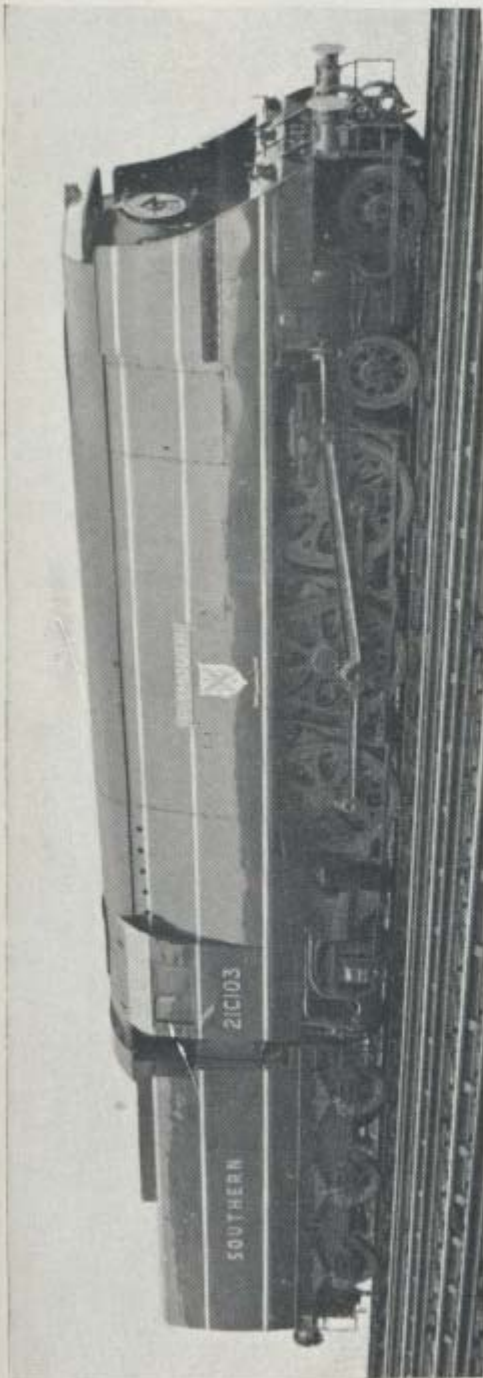
Like the "Merchant Navy" class, the new engines have turbo-generators which provide electric lighting for engine and tender code lamps, for the cab and gauges,



Nameplate of one of the locomotives, the "Plymouth," showing the city coat of arms

and for the examination of engine parts by the staff in the running sheds. The fireman, by means of a lever in the cab, can shake the firebars in the grate so that any clinker which has formed is broken up and any accumulation of ash is thereby dropped into the ashpan. An enclosed ashpan is fitted; this has necessitated the raising of the boiler barrel centre-line to 9 ft. 7½ in., the highest now in use in this country.

These locomotives are of no little importance, for they form in themselves one of the most ambitious building programmes for "Pacifics" ever undertaken in this country. No fewer than seventy of the new class are to be constructed, and a point of particular interest is the company's declared intention of using them for both passenger and freight services. It is, in effect, the extension of the mixed-traffic locomotive, built larger than usual, to cover every kind of demand for main-line haulage.



New 4-6-2 type "West-Country" class locomotive, Southern Railway

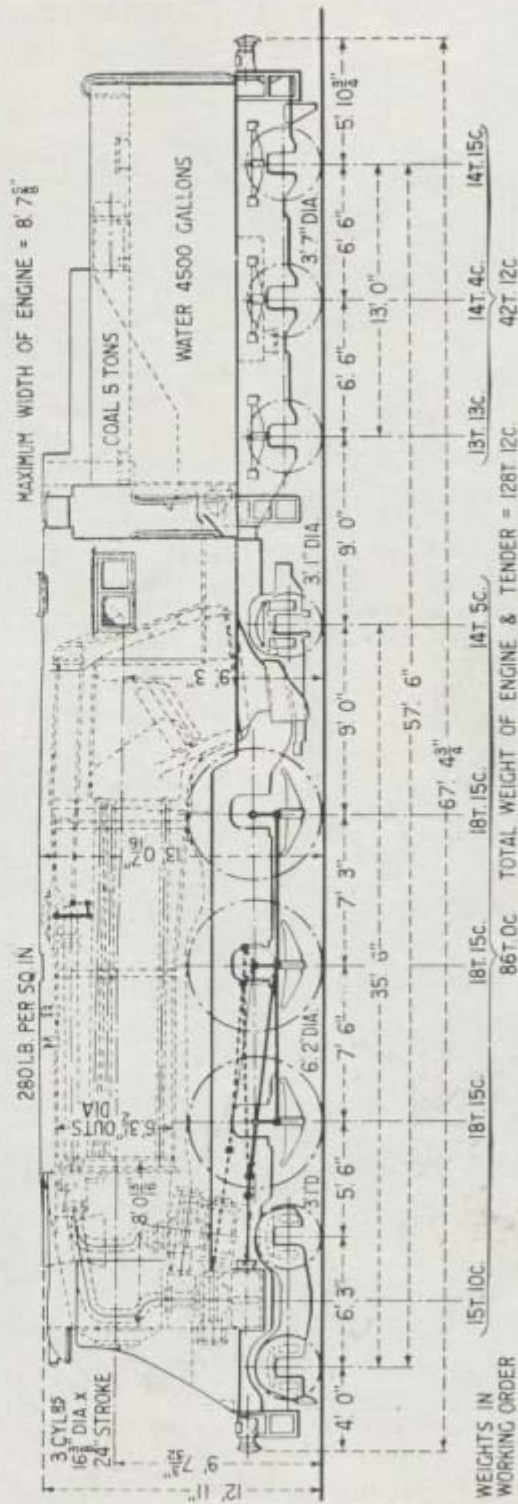


Diagram showing principal dimensions and weights

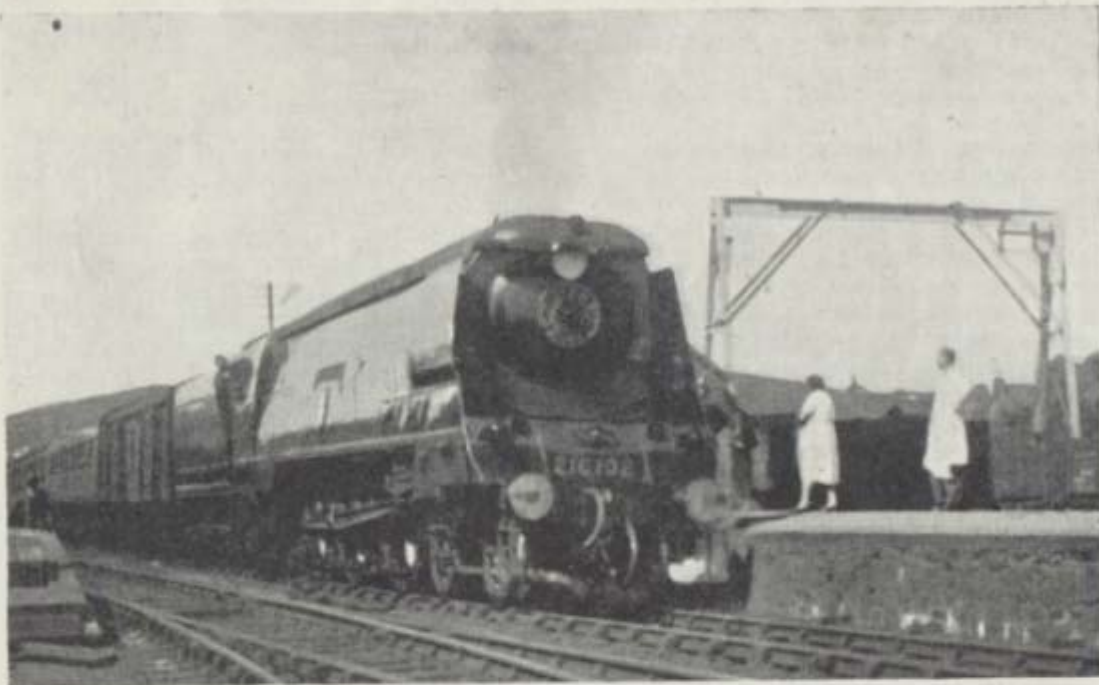


Photo by]

[H. D. Fuller

New "West Country" 4-6-2 No. 21C102, "Salisbury," on Ilfracombe-Exeter train at Braunton (See also pages 276-7)

S.R. "West Country" Class

MR. H. D. FULLER writes from North Devon to record the first arrival there on July 10 of one of the Southern Railway "West Country" class locomotives, of which some details are given elsewhere in this issue. On this date No. 21C102, *Salisbury*, worked the 1.40 p.m. from Exeter to Ilfracombe. The accompanying illustration was made from a photograph taken at Braunton Station during her return to Exeter on the 4.45 p.m. from Ilfracombe. On the next two days No. 21C101, *Exeter*, and No. 21C103, *Plymouth*, worked the 2.33 p.m. from Exeter to Ilfracombe.