

GENERAL STEAM NAVIGATION COMPANY LIMITED

The General Steam Navigation Company Limited was incorporated in 1824 and claims to be the oldest sea-going steamship company in the world. For a hundred and twenty years the Company has maintained cargo and passenger services from London and South and East Coast ports to the Continent.

The records of the Company show services between Brighton, Havre and Dieppe as far back as 1825, and in 1828 there was a service between Portsmouth and Bordeaux, afterwards altered to Southampton—Plymouth—Bordeaux.

The more recent association with Southampton started in the early 1870's, when the steamers of the General Steam from Bordeaux and Tonny-Charente began to call regularly at Southampton with cargoes mainly for transhipment to U.S.A., Canada and South Africa.

In 1842 the Company had the honour of providing a passage from Leith to London for H.M. Queen Victoria in the s.s. "Trident."

In the early days the steamers were all paddlers, and this type of ship is still in existence on some of the estuary summer passenger services. The Company now owns an efficient fleet, including a number of modern motor ships.

Other engines of this class which are already in service have been named as under, each bearing a replica of the House Flag of the Shipping Company concerned. They have been chosen by reason of their association with Southampton Docks, which are owned and managed by the Southern Railway.

Channel Packet
Union Castle
Royal Mail
Cunard White Star
Canadian Pacific

P. & O.
Aberdeen and Commonwealth
Orient Line
Shaw Savill
Blue Star

All classes of Engines
are being painted black
as a wartime measure.

Ad5349/100
8245

SOUTHERN MIXED TRAFFIC LOCOMOTIVES

"Merchant Navy" Class

Naming Ceremony

OF

"GENERAL STEAM NAVIGATION"

AT

WATERLOO STATION

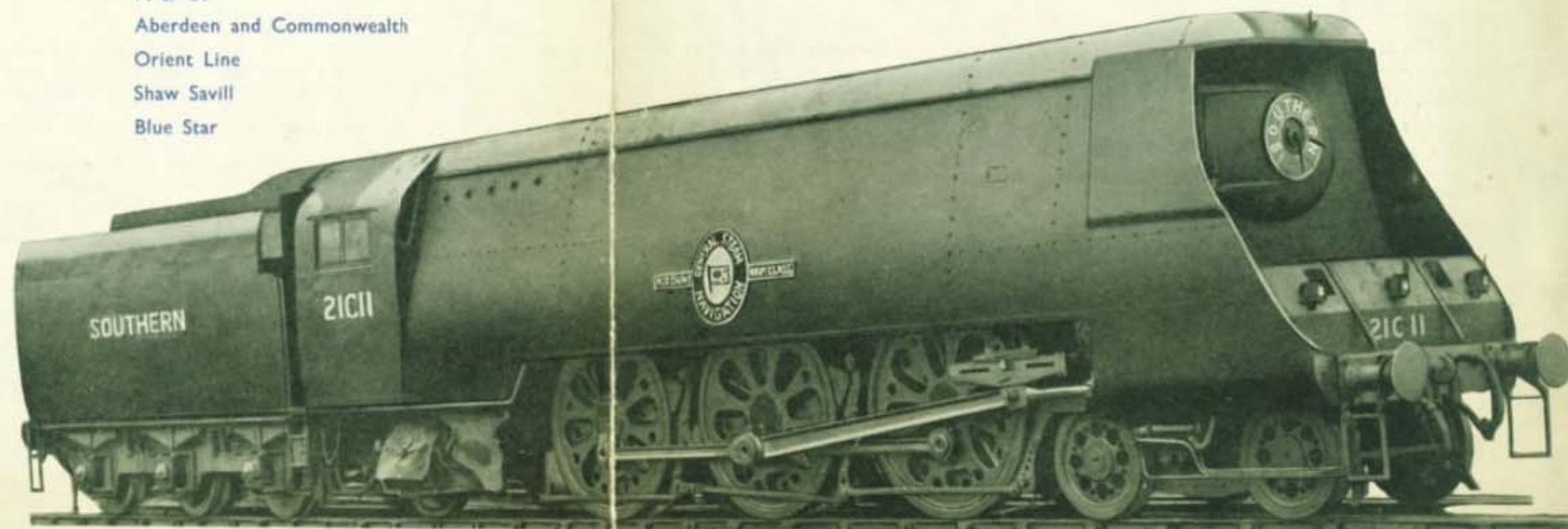
Tuesday, 20th February, 1945

BY

Mr. R. Kelso

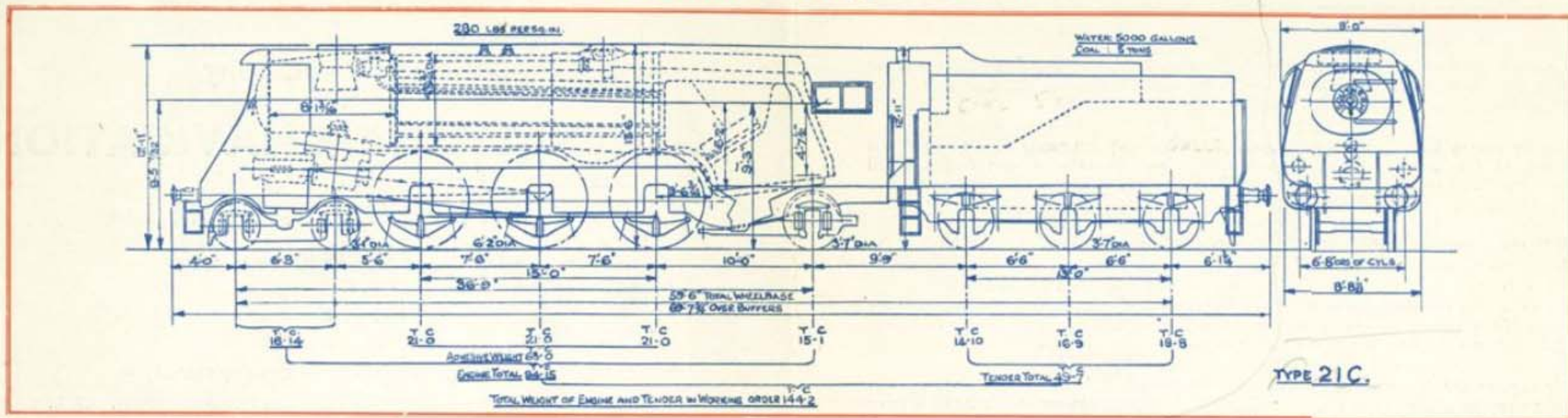
Chairman

The General Steam Navigation Company Limited
accompanied by Southern Railway Chairman, Col. Eric Gore-Browne, D.S.O.,
and General Manager, Sir Eustace Missenden, O.B.E.



SOUTHERN MIXED TRAFFIC LOCOMOTIVES

"Merchant Navy" Class



Cylinders :
Number ... 3
Diameter Stroke ... 18 X 24 in.

Valves :
Diameter ... 11 in.
Max. Travel ... 4 1/2 in.

Grate : Area ... 48.5 sq. ft.
Firebox : Volume ... 300 cu. ft.
Barrel :
Maximum diameter ... 4 ft. 3 1/2 in.
Distance between Tube Plates ... 17 ft.

LEADING DIMENSIONS

Tubes :
Number ... 124
Diameter ... 2 1/2 in.

Flues :
Number ... 40
Diameter ... 5 1/2 in.

Total evaporative Heating Surface ... 2,451 sq. ft.

Superheater : Heating Surface ... 822 sq. ft.

Total combined Heating Surface ... 3,273 sq. ft.

Tractive Effort at
85% Boiler Pressure } 37,500 lbs.

No. 21C11 "General Steam Navigation" is the first of a further series of ten 3-cylinder simple expansion high pressure stream-lined locomotives being built by the Southern Railway to the designs of the Company's Chief Mechanical Engineer, Mr. O. V. Bulleid.

The leading dimensions are given on and below the diagram.

The number 21C11, according to the new "SOUTHERN" notation, gives the number of the engine, whilst at the same time the wheel arrangement is indicated. The number of driving axles is indicated by the corresponding letter of the alphabet, e.g., C for three. The first numeral indicates the number of carrying axles in front of the driving wheels, in this case two, and the second the number of such axles behind the drivers, in this case one. The number after the capital letter is that of the engine in the class.

Among the new features incorporated in these engines are:—

(a) Streamlining: another and more accurate description would be "air-smoothed." The casing enclosing the engine is carried on the main frame instead of on the boiler, as is usually done, and the boiler, consequently, is free to expand inside it. The casing is fabricated by electric welding from rolled sections and 20 B.G. steel sheet.

(b) The cab is a continuation of the air-smoothed casing and, like it, is carried on the frame.

(c) The casing forward of the smoke-box door plate acts as an air collector. The large opening over the smoke-box door forms the mouth of a tunnel collecting the air and discharges it at the sides of the chimney. To prevent the smoke and steam being drawn down along the sides of the smoke-box and the boiler barrel, side screens are fitted at the smoke-box, which neutralise the down draught at the smoke-box.

The name of the engine is in raised letters on a cast brass ring surrounding a replica of the Steamship Company's house flag in vitreous enamel, on both sides of the air-smoothed casing.

(d) The enclosed space between the frames in front of the smoke-box holds the electric light turbo-generator and three mechanical lubricator pumps. This engine, like the first ten

of the class, is completely lighted by electricity, as both the engine and tender code lamps are so lighted, in addition to the gauges and the lamps fitted for inspection purposes.

(e) All the cast steel wheel centres, both engine and tender, are the new double-disc patent B.F.B. type.

(f) The coupled wheels are fitted with clasp brakes, i.e., each wheel has a brake block on each side.

(g) Cab fittings. Two live steam ejectors are fitted on the fireman's side, the steam and water controls being arranged in one group on the cab side.

The reversing gear is power operated, the steam and hydraulic cylinders being controlled by a single lever.

(h) The tender above the frame is all welded, the profile of the sides being the same as that of the latest "SOUTHERN" carriages.

Clasp brakes are fitted to the tender wheels operated by two 21-inch cylinders through automatic slack adjusters.

The tender is filled through covers in the tender cab end at each side, thereby making it unnecessary for the fireman to climb on to the top of the tender.

(i) The Boiler. The internal fire-box is of steel and is fitted with two thermic syphons. The inner and outer fire-boxes are welded.

Steam operated fire hole doors are fitted. The boiler is lagged with spun glass mattresses.

(j) Valve Gear. The Bulleid patent valve gear is fitted. The three sets are enclosed in an oil-tight casing inside the frames, which also encases the middle connecting rod, crosshead and crank. All bearings within this casing are lubricated by a continuous stream of oil pumped by gear pumps from the sump.

O. V. BULLEID, M.I.Mech.E., M.I.Loco.E.,
Chief Mechanical Engineer.