

REPORT ON MACHINERY.

No. 28883

Date of writing Report 1924 When handed in at Local Office - 2 AUG 1924 Port of Sunderland Received at London Office TUE. 5 AUG. 1924

No. in Survey held at Sunderland Date First Survey 1st Feb. Last Survey 22 July 1924

Reg. Book. on the new steel S/S "TAMWORTH" (Number of Plates 26) Gross 1332 Tons No 711

Master Built at Sunderland By whom built S. P. Austin & Sons Ltd (N° 306) When built 1924

Engines made at Sunderland By whom made J. Dickinson & Sons Ltd (N° 875) when made 1924

Boilers made at Sunderland By whom made J. Dickinson & Sons Ltd (N° 875) when made 1924

Registered Horse Power Owners R. S. Dalgleish, Ltd. Port belonging to Newcastle

Nom. Horse Power as per Section 28 173 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 18"-30"-49" Length of Stroke 33 Revs. per minute 80 Dia. of Screw shaft as per rule 9.98" Material of steel as fitted 1.03/8" screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight in the propeller boss yes If the liner is in more than one length are the joints burned — If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive — If two liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 3'-6"

INTER as per rule 8-9 Dia. of Crank shaft journals as per rule 9.34" Dia. of Crank pin 9.5" Size of Crank webs 17 1/2" x 6" Dia. of thrust shaft under collars 9.5" Dia. of screw 13-0" Pitch of Screw 13-0" No. of Blades 4 State whether moveable no Total surface 53 sq ft

No. of Feed pumps 2 Diameter of ditto 2 1/2" Strokes 16 1/2" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3 1/2" Strokes 16 1/2" Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps 1 @ 8 1/2" x 10" 2 @ 6 1/2" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 @ 2 1/2" (including suction in after well) In Holds, &c. Fore hold - 2 @ 2 1/2" After hold - 2 @ 2 1/2"

No. of Bilge Injections 1 sizes 4 Connected to condenser, or to circulating pump L.P. Is a separate Donkey Suction fitted in Engine room & size yes 3 1/2"

Are the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible none

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both

Are they sized sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Discharge Pipes above or below the deep water line above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes

What pipes are carried through the bunkers Cold suction How are they protected under wood casing

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes

Dates of examination of completion of fitting of Sea Connections 17-6-24 of Stern Tube 19-6-24 Screw shaft and Propeller 30-6-24

Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door — worked from Trachy aft

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel David Beville & Son Ltd & John James & Son Ltd (Barb)

Total Heating Surface of Boilers 2995 sq ft Forced Draft fitted no No. and Description of Boilers 2 single ended marine

Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 4-6-24 No. of Certificate 3884

Can each boiler be worked separately yes Area of fire grate in each boiler 41.3 sq ft No. and Description of Safety Valves to each boiler two direct spring Area of each valve 4.93 sq in Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 5 1/2" Mean dia. of boilers 13-0" Length 10-6" Material of shell plates steel

Thickness 1 1/16" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR

long. seams DBSTR Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 8" Lap of plates or width of butt straps 1-5 1/2"

Per centages of strength of longitudinal joint rivets 100 plate 85.2 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"

Size of compensating ring Flanged No. and Description of Furnaces in each boiler 2 Morrison Material steel Outside diameter 4'-0"

Length of plain part top Thickness of plates crown 1 1/16" bottom Description of longitudinal joint welded No. of strengthening rings —

Working pressure of furnace by the rules 181 Combustion chamber plates: Material steel Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 1/16"

Pitch of stays to ditto: Sides 9 3/8" x 9 3/8" Back 8 3/8" x 10 5/8" Top 9 3/8" x 9 3/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180

Material of stays steel Diameter at smallest part 2.030" Area supported by each stay 91.30" Working pressure by rules 199 End plates in steam space

Material steel Thickness 1 1/16" Pitch of stays 18 1/2" x 9 Horizontal stays secured DR & W Working pressure by rules 181 Material of stays steel

Diameter at smallest part 5.57" Area supported by each stay 33.30" Working pressure by rules 184 Material of Front plates at bottom steel

Thickness 1/8" Material of Lower back plate steel Thickness 3/16" Greatest pitch of stays 13 3/8" x 10 5/8" Working pressure of plate by rules 192

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates steel Thickness: Front 7/8" Back 7/8" Mean pitch of stays 9" x 11 1/4"

Pitch across wide water spaces 14 3/4" (3/4" WP) Working pressure by rules 229 Girders to Chamber tops: Material steel Depth and thickness of girder as centre 26 1/2" x 1" Length as per rule 29 3/4" Distances apart 9 3/4" Number and pitch of stays in each 2 @ 9 3/8"

Working pressure by rules 195 Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately

Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

007620 - 007625 - 0028

IS A DONKEY BOILER FITTED? no

If so, is a report now forwarded? —

SPARE GEAR. State the articles supplied:— Two connecting rod top and bottom end bolts and nuts. Two main bearing bolts, one set of coupling bolts, one set of feed and ledge pump valves, iron and bolts of various sizes. one propeller.

The foregoing is a correct description,

* See foot of report for manufacturer's signature - signed in enrol.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1924 Feb. 14, 18, 29, March 21, 28, April 15, May 7, 16, 20, 26, 28, 30, June 11, 12, 13, 17, 19, 30
During erection on board vessel - - - July 2, 3, 4, 7, 11, 17, 28
Total No. of visits 26

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " "

Dates of Examination of principal parts—Cylinders 20-6-24 Slides 12-6-24 Covers 11-6-24 Pistons 30-5-24 Rods 28-5-24

Connecting rods 15-4-24 Crank shaft 20-5-24 Thrust shaft 20-5-24 Tunnel shafts none Screw shaft 13-6-24 Propeller 13-6-24

Stern tube 13-6-24 Steam pipes tested 3-7-24 Engine and boiler seatings 11-6-24 Engines holding down bolts 3-7-24

Completion of pumping arrangements 22-7-24 Boilers fixed 30-6-24 Engines tried under steam 7-7-24

Main boiler safety valves adjusted 7-7-24 Thickness of adjusting washers Pot. lbs. - F 8" A 8" Std lbs F 39" A 8"

Material of Crank shaft Steel Identification Mark on Do. LLOYDS NO 61 L.C.D. 20-5-24 Material of Thrust shaft Steel Identification Mark on Do. LLOYDS NO 77 L.C.D. 20-5-24

Material of Tunnel shafts none Identification Marks on Do. 20-5-24 Material of Screw shafts Steel Identification Marks on Do. LLOYDS NO 77 L.C.D. 20-5-24

Material of Steam Pipes Copper Test pressure 400 lbs per sq. in.

Is an installation fitted for burning oil fuel no Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case no If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to safety, etc.)

The materials and workmanship are good.
The machinery has been constructed under special survey and is eligible in my opinion for classification and the Rating LMC 7.24

+ LMC 7.24 C.L.

L. Davis

Engineer Surveyor to Lloyd's Register of Shipping

The amount of Entry Fee ... £ 3
Special ... £ 43 5
Donkey Boiler Fee ... £
Travelling Expenses (if any) £

When applied for,

24 JUL 1924

When received,

31 JUL 1924

Committee's Minute

FRI 8 AUG 1924

Assigned

+ LMC 7.24 C.L.