

REPORT ON MACHINERY.

Received at London Office

Date of writing Report 1st April 1917 When handed in at Local Office 19 Port of NEWCASTLE-ON-TYNE APR. 8 - 1919

No. in Survey held at Newcastle on Tyne Date, First Survey 19 Sept 1917 Last Survey 4th Mar 1919
Reg. Book. on the SCREW STEAMER DACRE CASTLE. (Number of Visits 98)

Master Built at Newcastle on Tyne By whom built Swan Hunter & Wigham Richardson When built 1919
Tons Gross 5278 Net 327

Engines made at Newcastle on Tyne By whom made Swan Hunter & Wigham Richardson when made 1919

Boilers made at Newcastle on Tyne By whom made R.W. Hawthorn Leslie & Co. when made 1919

Registered Horse Power Owners The Lancashire Steamship Coy. Port belonging to Liverpool

Nom. Horse Power as per Section 28 577 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes

ENGINES, &c. — Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 27-1/2 - 11-1/2 - 7-3/8 Length of Stroke 48 Revs. per minute 78 Dia. of Screw shaft as per rule 11-1/2 Material of screw shaft Steel

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

the propeller boss Yes If the liner is in more than one length are the joints burned the length 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 5' 0 1/2

Dia. of Tunnel shaft as per rule 13-3/8 Dia. of Crank shaft journals as per rule 14-1/2 Dia. of Crank pin 11-1/2 Size of Crank webs 23 x 9 Dia. of thrust shaft under

rollers 14-1/2 Dia. of screw 17-6 Pitch of Screw 16-6 No. of Blades 4 State whether moveable No Total surface 98.2 sq. ft.

No. of Feed pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work Yes

No. of Donkey Engines Three Sizes of Pumps 9 1/2 x 7 x 18 10 1/2 x 14 x 24 No. and size of Suctions connected to both Bilge and Donkey pumps

in Engine Room Three 3 1/2 dia. In Holds, &c. No. 1 HOLD Dia 3 1/2 dia No. 2 HOLD Dia 3 1/2 dia

No. 3 HOLD (Reserve Bunker) Dia 3 1/2 dia No. 4 HOLD Dia 3 1/2 dia No. 5 HOLD Dia 3 1/2 dia TUNNEL WELL Dia 2 1/2 dia

No. of Bilge Injections 1 sizes 8 Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2 dia

Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

Are they fixed 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 Below

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 Hold Suctions How are they protected Cased in

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 16/12/18 of Stern Tube 16/12/18 Screw shaft and Propeller 16/12/18

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from upper platform

BOILERS, &c. — (Letter for record \$) Manufacturers of Steel J. Spence & Sons

Total Heating Surface of Boilers 4668 Is Forced Draft fitted Yes No. and Description of Boilers 2 Cylindrical Small Single

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 15/5/18 No. of Certificate 9193

Can each boiler be worked separately Yes Area of fire grate in each boiler 63.59 sq. ft. No. and Description of Safety Valves to

each boiler 2 Relief Spring loaded Area of each valve 9.62 Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork About 48 Mean dia. of boilers Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

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

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

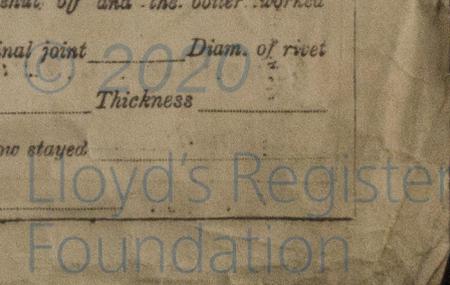
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

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

WISI - 0221



IS A DONKEY BOILER FITTED? *No* If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— 2 Conn Rod Top End Bolts & nuts, 2 Conn Rod Bolt End Bolts & nuts, 2 main Bearing Bolts & nuts, 3 Crank shaft Coupling Bolts & nuts, 3 Journal shaft Coupling Bolts & nuts, 2 Feed Pump valves, 2 Relief pump valves, 2 main Feed Check valves, 2 Condenser Check valves, 50 Bolts & nuts assorted, 6 Cylinder Cover Studs & nuts, 12 Journal Ring Studs & nuts, 8 Pairs of End Pins, 1 C.S. Propeller, 6 Steam Chest Cover Studs & nuts, 6 Studs of End pins for Bolts mounting, 2 Cent Rivets, 12 main Condenser tubes, 25 Capped Exhausters, 25 plain do, 6 Air pump valves, 2 Packing for each Piston Rod & valve spindle, 1 spare Feed pump escape valve spring, Valve disc for main engine valve, 1 Viller's Bucket, 1 Diaphragm for each size Reducing valve, 1 Spare Gear for Centrifugal pump engine, 1 Wrench, also 12 Bolts tubes 100 Condenser Packings, 100 Gamp Flanges 1 1/2" dia

The foregoing is a correct description, Feed Donkey, General Service Donkey, Ballast Donkey, Fan Engine & Wrenches, also 12 Bolts tubes 100 Condenser Packings, 100 Gamp Flanges 1 1/2" dia
 FOR SWAN, HUNTER, & WILSON, LTD. Manufacturers.

Dates of Survey while building: During progress of work in shops - - 1917 Sept. 19, 26, Oct. 15, 30, Nov. 13, 19, 27, Dec. 7, 12, 14, 18, 20, 24, 1918 Jan. 8, 10, 14, 29, Mar. 19, 25
 During erection on board vessel - - - - - Apr. 12, 15, 16, 17, 18, 23, 25, 29, May 1, 2, 10, 14, 28, 29, June 11, 17, 18, 20, July 13, 18, 22, 23, 24, 27, 30, Aug 7, 9, 12, 14, 15, 20, 22, 27, 28, Sept 2, 9, 12, 13, 24, 26, 30, Oct 5, 15, 20, 22, 26, Dec 1, 5, 9, 11, 13, 16, 18, 23, 24, 27, 30, Jan 6, 8, 9, 10, 17, 20, 22, 23, 25, 28, 29, 30
 Total No. of visits 31 Feb, 3, 5, 19, 26 Mar 7 (98.)

Dates of Examination of principal parts—Cylinders 30/1/19 Slides 30/1/19 Covers 26/3/19 Pistons 23/12/18 Rods 1/19
 Connecting rods 3/1/19 Crank shaft *See Report* Thrust shaft 18/12/18 Tunnel shafts 3/12/18 Screw shaft 12/12/18 Propeller 6/12/18
 Stern tube 6/12/18 Steam pipes tested *See Report* Engine and boiler seatings 4/12/18 Engines holding down bolts 17/2/19
 Completion of pumping arrangements 7/3/19 Boilers fixed 17/2/19 Engines tried under steam 26/3/19
 Main boiler safety valves adjusted 18/3/19 Thickness of adjusting washers 1 1/2" SV 2 1/2" 1 1/2" SV 2 1/2" 1 1/2" SV 2 1/2"
 Material of Crank shaft *Steel* Identification Mark on Do. 3215-N Material of Thrust shaft *Steel* Identification Mark on Do. 4537
 Material of Tunnel shafts *Steel* Identification Marks on Do. 4537 Material of Screw shafts *Steel* Identification Marks on Do. 4522
 Material of Steam Pipes *W.S. Lap welded* Test pressure *Tested at Glasgow*
 Is an installation fitted for burning oil fuel. 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 *Yes* If so, state name of vessel *Standard A*

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Engines & Boilers of this vessel were built under special license and the materials and workmanship are good. On completion the were examined under steam at sea on a full power trial and found to work satisfactorily.

The machinery throughout is now in good and efficient condition and eligible in our opinion to have the record of **LMC 3, 19** marked in the Society's Register Book

It is submitted that this vessel is eligible for THE RECORD + LMC 3 19. F.D.

W.R. Austin
 14/4/19

The Surveyors are requested not to strike on or below the space for Committee's Minute.

The amount of Entry Fee ... £ 12 : : When applied for, 1919
 Special ... £ 47 : 5 : 12/4/19
 Donkey Boiler Fee ... £ 88 : 15 : 9
 Travelling Expenses (if any) £ : :
 TUE 15 APR. 1919

W.R. Austin + W. Sindale
 Engineer Surveyors to Lloyd's Register of British & Foreign Shipping

Committee's Minute
 Assigned + L.M.C. 3:19 J.S.

New made

