

REPORT ON MACHINERY. No. 84182.

Received at London Office 4 APR 1921

Date of writing Report 4 APR 1921 When handed in at Local Office 4 APR 1921 Port of (Spw) London.

No. in Survey held at Kings Lynn + Lowestoft Date, First Survey 10 January 1919 Last Survey 17 MARCH 1921.

Reg. Book. on the Steel Drifter "Morn" Master Built at Kings Lynn By whom built Kings Lynn. S. B. Co. Ltd. When built 1921

Engines made at Kings Lynn. By whom made Dodman & Co. Ltd. when made 1921

Boilers made at Aldbury By whom made E. Danks & Co. Ltd. when made 1920

Registered Horse Power Owners The Admiralty Port belonging to ✓

Tom. Horse Power as per Section 28 43 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

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

Dia. of Cylinders 9 1/2", 15 1/2" + 26" Length of Stroke 18 Revs. per minute Dia. of Screw shaft as per rule 5.46 Material of screw shaft as fitted 6" Steel

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 2' 1"

Dia. of Tunnel shaft as per rule 5.04" Dia. of Crank shaft journals as per rule 5 1/4" Dia. of Crank pin 5 1/4" Size of Crank webs 10" x 3 1/2" Dia. of thrust shaft under

collars 5 1/4" Dia. of screw 6'-9" Pitch of Screw 8'-6" No. of Blades 4 State whether moveable No Total surface 18 1/2"

No. of Feed pumps 1 Diameter of ditto 2" Stroke 9" Can one be overhauled while the other is at work ✓

No. of Bilge pumps 1 Diameter of ditto 2" Stroke 9" Can one be overhauled while the other is at work ✓

No. of Donkey Engines 1 Sizes of Pumps 5 1/2" x 3 1/2" x 5" Duplex No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room One of 2" In Holds, &c. Forehold one of 2", also ejecta drawing

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

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 None

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 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 Fuel suction How are they protected Wood casings

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

Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers One single ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 5-11-20 No. of Certificate 451

Can each boiler be worked separately ✓ Area of fire grate in each boiler ✓ No. and Description of Safety Valves to

each boiler 2 Spring loaded Area of each valve 39 sq" Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork About 7" 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 Area 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 Front plates at bottom

Area 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 side 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 Steam dome: description of joint to shell % of strength of joint

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

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted



IS A DONKEY BOILER FITTED? ✓

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied: - Two top & two both end bolts & nuts, two main bearing + one set couple bolts, one set each of air, circulating, feed & bilge pump valves, one each, main & donkey chest valves, 1 safety valve spring, 6 condenser tubes, 12 ferrules, 50 tape packings, 24 assorted bolts & nuts, 6 cyl. cover studs & nuts, 6 junk ring bolts & nuts, 6 gauge glasses & rings, 3 plain boiler tubes, 1 set gaskets & turning bars complete for both furnaces.

The foregoing is a correct description,

For ALFRED DODMAN & Co. Ltd.

A. S. Cripp

Manufacturer.

Dates of Survey while building: (1919) JAN 10-31 FEB 28 MAY 16-23 June 13 July 26 Sep 19 Nov 18 (1920) MAR 25 June 18 July 13-22 Sep 17-18 (1921) JAN 6-22-31 FEB 1-2-14-16 MAR 1-8-15-16-17

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts: Cylinders 10-1-19, Slides 10-1-19, Covers 10-1-19, Pistons 10-1-19, Rods 10-1-19, Connecting rods 18-10-18, Crank shaft 16-5-19, Thrust shaft 16-5-19, Tunnel shafts 28-2-19, Screw shaft 22-7-20, Propeller 13-7-20, Stern tube 18-11-19, Steam pipes tested 29-7-19, Engine and boiler seatings 1-9-20, Engines holding down bolts 6-1-21, Completion of pumping arrangements 15-3-21, Boilers fixed 29-11-20, Engines tried under steam 16-3-21, Completion of fitting sea connections 10-8-20, Stern tube 10-8-20, Screw shaft and propeller 10-8-20, Main boiler safety valves adjusted 15-3-21, Thickness of adjusting washers P. 9/16 B 15/32

Material of Crank shaft Steel, Identification Mark on Do. 351, Material of Thrust shaft Steel, Identification Mark on Do. 285, Material of Tunnel shafts Steel, Identification Marks on Do. ✓, Material of Screw shafts Steel, Identification Marks on Do. 283, Material of Steam Pipes Copper (Solid drawn), Test pressure 450 lbs per sq. inch.

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 S. S. 'Melody' Lon. report 844

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been built under Special Survey, in accordance with the Admiralty Specifications & Society's Rules. The materials & workmanship are sound & good. The boiler and engines have been examined whilst being installed in vessel, afterwards tried under full power, & found satisfactory, the boiler being examined under steam & safety valves adjusted.

The machinery is now eligible in our opinion to have the record of + L.M.C. 3-21 in the Register Book.

Whilst steam was being raised on the day previous to vessel going out on full power trial, water was observed running out of both furnaces, after boiler was blown down, an examination was made inside of both combustion chambers, & 22 screw stays in Port Chamber + 18 in S. chamber, also a number on outside of shell, found leaky, these were caulked, & boiler hydrolic tested to 270 lbs per sq. inch found satisfactory. On full power trial the boiler appeared tight & sound.

Certificate (if required) to be sent to The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £ : : When applied for. Special Agreed Fee... £ 9 0 0 - APR 1921 Donkey Boiler Fee ... £ 4 10 0 When received. Travelling Expenses (if any) £ : : 24-5-19-21

A. E. Larminer + P. Rae Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 8 APR. 1921

Assigned + L.M.C. 3. 21

C.L.

CERTIFICATE WRITTEN

FRI. 10 JUN. 1921



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