

REPORT ON MACHINERY.

No. 8491.

Received at London Office

-3 SEP 1924

Date of writing Report

1st Sept 1924

When handed in at Local Office

2nd Sept

Port of

Dundee

No. in Survey held at
Reg. Book.

Dundee

Date, First Survey 15th May 1924 Last Survey 28th Aug 1924

on the

SS "RYDAL FORCE"

(Number of Visits 20)

Gross

Net

Master Built at Dundee By whom built Caledon S. B. & L. Co. (Bk no 291) When built 1924

Engines made at Boatbridge By whom made W. Beardmore & Co. Ltd (Eng no 606 when made 1924

Boilers made at Dundee By whom made Cooper & Co. Ltd (Bk nos 459-460 when made 1924

Registered Horse Power Owners W. S. Kennaugh & Co Port belonging to Whitehaven

Nom. Horse Power as per Section 28 149. ✓ 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 16"-27"-44" ✓ Length of Stroke 30" ✓ Revs. per minute 90 ✓ Dia. of Screw shaft as per rule. Material of screw shaft as fitted.

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 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

Dia. of Tunnel shaft as per rule. Dia. of Crank shaft journals as per rule. Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under

collars Dia. of screw Pitch of Screw No. of Blades State whether moveable Total surface

No. of Feed pumps See Diameter of ditto Stroke Can one be overhauled while the other is at work

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

No. of Donkey Engines 2. ✓ Sizes of Pumps 6" x 6" x 4" & 8" x 8" x 7" ✓ No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 1 @ 2 1/2" strokehold 1 @ 3" ✓ In Holds, &c. 2 @ 2 1/2" ✓

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

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 Bilge suction to hold. ✓ How are they protected Strong 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 No tunnel ✓ Is it fitted with a watertight door worked from ✓

BOILERS, &c.—(Letter for record

15)

Manufacturers of Steel W. Beardmore & Co. Ltd. & Colville & Co. Ltd. of Scotland

Total Heating Surface of Boilers 2760 ✓ Is Forced Draft fitted No ✓ No. and Description of Boilers 2 SB Two single ended multitubular

Working Pressure 180 lbs ✓ Tested by hydraulic pressure to 320 lbs ✓ Date of test 24-6-24 ✓ No. of Certificate 1005 ✓

Can each boiler be worked separately Yes ✓ Area of fire grate in each boiler 42 ✓ No. and Description of Safety Valves to

each boiler Two spring loaded Area of each valve 4.9 ✓ 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 7'-0" ✓ 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 Are stays 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 stays

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 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 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

W289-0124

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 1 set each of top & bottom end, main bearing & coupling bolts, 1 set of feed, bilge, air & circulating pump valves, 6 piston junk ring bolts, 1 set each of piston & valve rod gland studs, 2 safety valve springs, 6 condenser tubes & 12 ferrules, assorted bar iron, bolts and nuts, 1 feed check valve for each of main & auxiliary feed chests.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1924 MAY 15. JUN. 5. 16. 19. 25. JULY 1. During erection on board vessel - - 1924 JULY 8. 9. 15. 22. AUG 5. 8. 12. 18. 20. 22. 25. 26. 29. 28. Total No. of visits 20. Is the approved plan of main boiler forwarded herewith ✓ " " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders - Slides - Covers - Pistons - Rods - Connecting rods - Crank shaft - Thrust shaft - Tunnel shafts - Screw shaft - Propeller - Stern tube - Steam pipes tested 8-8-24 Engine and boiler seatings 15-5-24 Engines holding down bolts 12-8-24 Completion of pumping arrangements 27-8-24 Boilers fixed 12-8-24 Engines tried under steam 26-8-24 Completion of fitting sea connections 1-7-24 Stern tube 1-7-24 Screw shaft and propeller 1-7-24 Main boiler safety valves adjusted 22-8-24 Thickness of adjusting washers P. P. 3/8" S. 3/8" S. P. 3/8" S. 3/8" scant. Material of Crank shaft ✓ Identification Mark on Do. ✓ Material of Thrust shaft ✓ Identification Mark on Do. ✓ Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts ✓ Identification Marks on Do. ✓ Material of Steam Pipes Seamless Copper 3 1/2" dia 9. W.G. ✓ Test pressure 360 lbs. ✓ 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 No ✓ If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. The Engines & Boilers of this vessel have been fitted on board in a satisfactory manner, tried under working conditions and found efficient and are eligible in my opinion to be classed with record of + L.M.C. 8-24.

It is submitted that this vessel is eligible for THE RECORD, + LMC 8. 24. CL.

JWD 4/9/24 JMR

The amount of Entry Fee ... £ : : When applied for, Special 1/5 fitting on board £ 7 : 9 : 2-9-1924 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 16/10/24

Committee's Minute

TUES. 9 SEP 1924

Assigned

+ L.M.C. 8. 24 C.L.

Engineer Surveyor to Lloyd's Register of Shipping.



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CERTIFICATE WRITTEN