

REPORT ON MACHINERY.

No. 8491.

Received at London Office

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Date of writing Report 1st Sept 1924 When handed in at Local Office 2nd Sept 1924 Port of Sunder
No. in Survey held at Sunder Date, First Survey 15th May 1924 Last Survey 28th Aug 1924
Reg. Book. on the "RYDAL FORCE" (Number of Visits 20)

Master Built at Sunder By whom built Caledon S. B. & Co. Ltd No 291 Tons }
Engines made at Boatbridge By whom made W. Beardmore Co. Ltd (Eng No 606 when made 1924 }
Boilers made at Sunder 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 Material of 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
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 Dia. of Crank shaft journals 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 moceable Total surface

No. of Feed pumps 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 6x6x4" & 8x8x7" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 1 @ 2 1/2" Stokehold 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 3"-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 & Sons. Steel Co of Scotland

Total Heating Surface of Boilers 2760 sq ft Is Forced Draft fitted No No. and Description of Boilers 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 sq ft No. and Description of Safety Valves to each boiler Two spring loaded
Area of each valve 4.9 sq in 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 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 Thickness of plates 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

