

# REPORT ON MACHINERY

BOX CASE

No. 71171

Received at London Office

Date of writing Report 28th Aug 1918 when handed in at Local Office 28th Aug 1918 Port of NEWCASTLE-ON-TYNE  
 No. in Survey held at Farron Date, First Survey 17th Apr. Last Survey 6th Aug 1918  
 Reg. Book. 284 on the S.S. Clydebrae (Number of Visits 25)  
 Master Bourling Built at Bourling By whom built Scott & Co Tons { Gross 502 Net 200  
 Engines made at Kirkcaldy By whom made Douglas & Grant. when made 1918  
 Boilers made at Glasgow By whom made Ross & Duncan when made 1906  
 Registered Horse Power \_\_\_\_\_ Owners North of England Port & Docks Co Port belonging to Glasgow

Nom. Horse Power as per Section 28 (86) Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No.

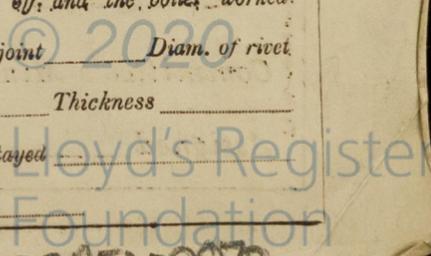
ENGINES, &c. — Description of Engines See Letter rpt No 15421 No. of Cylinders ✓ No. of Cranks ✓  
 Dia. of Cylinders \_\_\_\_\_ Length of Stroke \_\_\_\_\_ Revs. per minute 70 Dia. of Screw shaft \_\_\_\_\_ as per rule \_\_\_\_\_ Material of screw shaft \_\_\_\_\_ as fitted \_\_\_\_\_  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube \_\_\_\_\_ 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 \_\_\_\_\_  
 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 9-2 Pitch of Screw 12-0 No. of Blades 4 State whether moveable No Total surface 31 sq ft.  
 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 Two Sizes of Pumps 4 1/2 x 5 & 4 1/2 x 3 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Two 2" diam In Holds, &c. Two 2" diam

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump Pumps 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 \_\_\_\_\_  
 Are all connections with the sea direct in 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 Hold Suctions How are they protected Head bearing  
 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 10/7/18 of Stern Tube 3/5 10/5 Screw shaft and Propeller 10/5/18  
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

BOILERS, &c. — (Letter for record \_\_\_\_\_) Manufacturers of Steel Boiler made 1906 & originally fitted on board the S.S. Jon Forsetti.  
 Total Heating Surface of Boilers 1567 sq ft Is Forced Draft fitted No No. and Description of Boilers One Single Ended  
 Working Pressure 180 lbs Tested by hydraulic pressure to \_\_\_\_\_ Date of test 1/10/06 No. of Certificate 8367

Can each boiler be worked separately \_\_\_\_\_ Area of fire grate in each boiler 52 sq ft No. and Description of Safety Valves to each boiler Two direct opening Area of each valve 5.940 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 5-0" 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 \_\_\_\_\_ 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 \_\_\_\_\_  
 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 \_\_\_\_\_

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:

Two top & two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, 2 feet & 2 1/2 inch pump valves & seats, assorted bolts & nuts & a few bars of iron.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building: During progress of work in shops, During erection on board vessel, Total No. of visits.

Is the approved plan of main boiler forwarded herewith?

Originally fitted by J. Forster

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

Engine and boiler seatings

Engines holding down bolts

Completion of pumping arrangements

Boilers fixed

Engines tried under steam

Main boiler safety valves adjusted

Thickness of adjusting washers

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

Copper

Test pressure

360 lb per sq. in.

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?

If so, state name of vessel.

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

The new engine made by Douglas & Grant 1918 and the old boiler made by Ross & Duncan 1906 with new safety valves & mountings & funnel have been securely fitted on board & satisfactorily tested under steam.

In my opinion the machinery of this vessel is now in good condition and eligible for record: L.M.C. 8.18. N.C. 1918. Boiler 1906, re-fitted 1918. 180 lb, B.S. 8.18. Tail shaft N 8.18.

NEWCASTLE-ON-TYNE

Certificates (if required) to be sent to the Bureau or to the Registrar of Shipping (if required) to be sent to the Registrar of Shipping.

The amount of Entry Fee: Special £ 8.10. When applied for: 8. AUG 1918. Doukey Boiler Fee £. Travelling Expenses (if any) £.

George Murdoch, Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute: Assigned.

