

## REPORT ON MACHINERY.

No. 28009

Received at London Office

WED. OCT. 21. 1914

Date of writing Report 6th Oct. When handed in at Local Office 13. 10 - 1914 Port of Hull.No. in Survey held at Hull. Date, First Survey 15. 1 - 14 Last Survey 2. 10. 1914  
Reg. Book. 379. on the S.S. "DESTINN." ATS 2454 (Number of Tonnage 20)Master By whom built Book. Nelson. Renard When built 1914  
Engines made at Hull. By whom made Amos & Smith Ltd. when made 1914  
Boilers made at Hull. By whom made Amos & Smith Ltd. when made 1914Registered Horse Power 75 Owners A. L. Black Port belonging to GrimbyNom. Horse Power as per Section 28 75 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted noENGINES, &c. — Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3Dia. of Cylinders 12" 21" 34" Length of Stroke 24" Revs. per minute ✓ Dia. of Screw shaft 7.23" Material of ✓  
as per rule 6.48" as fitted 6.44" Dia. of Crank shaft journals 6.8" as per rule 7" as fitted 7" Dia. of Crank pin 7" Size of Crank webs 14.8" x 18" of thrust shaft under collars 7" Dia. of screw 8-9" Pitch of Screw 11-0" No. of Blades 4 State whether moveable no Total surface 29.5"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 on, protected between the liners ✓ Length of stern bush 6.8"Dia. of Tunnel shaft 6.48" as per rule 6.44" as fitted 6.44" Dia. of Crank shaft journals 6.8" as per rule 7" as fitted 7" Dia. of Crank pin 7" Size of Crank webs 14.8" x 18" of thrust shaft under collars 7" Dia. of screw 8-9" Pitch of Screw 11-0" No. of Blades 4 State whether moveable no Total surface 29.5"No. of Feed pumps 1 Diameter of ditto 2.5" Stroke 12" Can one be overhauled while the other is at work ✓No. of Bilge pumps 1 Diameter of ditto 2.5" Stroke 12" Can one be overhauled while the other is at work ✓No. of Donkey Engines One Sizes of Pumps 6 3/4" x 4 3/4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 2-2" One forward. one aft. In Holds, &c. 2-2" For peak & slush well2 1/2" suction from all bilges.No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room no 2 1/2" suctionAre 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 noAre all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks BothAre 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 aboveAre 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 yesWhat pipes are carried through the bunkers Hold suction How are they protected Wood casingAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesDates of examination of completion of fitting of Sea Connections 27. 6. 14 of Stern Tube 27. 6. 14 Screw shaft and Propeller 27. 6. 14Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door worked fromBOILERS, &c. — (Letter for record S) Manufacturers of Steel Messrs. Phoenix Co. of Harde.Total Heating Surface of Boilers 1179 Is Forced Draft fitted no No. and Description of Boilers No single-endedWorking Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 30. 7. 14 No. of Certificate 3009Can each boiler be worked separately ✓ Area of fire grate in each boiler 31.5 No. and Description of Safety Valves to each boiler 2. Spring Area of each valve 3.9 Pressure to which they are adjusted 20.5 lbs. Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 7" Mean dia. of boilers 12.9 3/4" length 10' 0" Material of shell plates SThickness 1 1/8" Range of tensile strength 24-33 Are the shell plates welded or flanged ✓ Descrip. of riveting: cir. seams BRKlong. seams J.R. & B. Diameter of rivet holes in long. seams 1 3/32" Pitch of rivets 7 3/4" Lap of plates or width of butt straps 16 3/4"Per centages of strength of longitudinal joint 89.5 Working pressure of shell by rules 203 Size of manholes in shell 16" x 12"Size of compensating ring 40 x 30 x 18 No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 37.625Length of plain part 75" Thickness of plates 13" Description of longitudinal joint welded No. of strengthening rings 3Working pressure of furnace by the rules 222 Combustion chamber plates: Material S Thickness: Sides 3/4" Back 3/32" Top 1/16" Bottom 3/4"Pitch of stays to ditto: Sides 8 3/8" x 9 1/2" Back 9 1/4" x 8" Top 8 1/2" x 9 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 201Material of stays S Diameter at smallest part 1.76" Area supported by each stay 81.25 Working pressure by rules 229 End plates in steam spaceMaterial S Thickness 1 1/16" Pitch of stays 15 3/4" x 16 1/2" are stays secured 15 fms Working pressure by rules 206 Material of stays SArea at smallest part 6.1 Area supported by each stay 254.8 Working pressure by rules 244 Material of Front plates at bottom SThickness 1 1/16" Material of Lower back plate S Thickness 15" Greatest pitch of stays 14 1/2" x 8" Working pressure of plate by rules 221Diameter of tubes 3 1/2" Pitch of tubes 5" x 4 7/8" Material of tube plates S Thickness: Front 1 1/16" Back 7/8" Mean pitch of stays 9 3/4" x 10"Pitch across wide water spaces 14 1/2" Working pressures by rules 206 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8" x 2" Length as per rule 32 3/4" Distance apart 8 1/2" Number and pitch of stays in each 2 at 9 1/2"Working pressure by rules 213 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

IS A DONKEY BOILER FITTED?

NO.

If so, is a report now forwarded?

✓

SPARE GEAR. State the articles supplied:-

Two each top and bottom end connecting rod bolts & nuts, two main bearing bolts and nuts, one set of coupling bolts and nuts, one set each feed & bilge pump valves, iron of various sizes, a quantity of assorted bolts, nuts, etc.

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

*H. Prachevalley*

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1914: Jan 15, May 26, Jun 12, 19, 23, 27, Jul 3, 15, 18, 21, 23, 28, 31, Aug 10, Sep 15, 16, 22  
During erection on board vessel - Sep 26, 28, Oct 2  
Total No. of visits 20

Is the approved plan of main boiler forwarded herewith? yes ✓

" " " donkey " " ✓

Dates of Examination of principal parts - Cylinders 18.7.14, Slides 18.7.14, Covers 18.7.14, Pistons 18.7.14, Rods 23.7.14, Connecting rods 23.7.14, Crank shaft 21.7.14, Thrust shaft 21.7.14, Tunnel shafts ✓, Screw shaft 23.6.14, Propeller 23.6.14, Stern tube 23.6.14, Steam pipes tested 16.9.14, Engine and boiler seatings 23.6.14, Engines holding down bolts 22.9.14, Completion of pumping arrangements 2.10.14, Boilers fixed 22.9.14, Engines tried under steam 26.9.14, Main boiler safety valves adjusted 26.9.14, Thickness of adjusting washers  $pv \frac{7}{16}$   $sv \frac{7}{16}$

Material of Crank shaft S. Identification Mark on Do. 1239, Material of Thrust shaft S. Identification Mark on Do. 1239

Material of Tunnel shafts ✓ Identification Marks on Do. ✓, Material of Screw shafts S. Identification Marks on Do. 1239

Material of Steam Pipes Copper Solid drawn ✓, Test pressure 400 lbs. hyd. press. ✓

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 & boiler of this vessel have been constructed under special survey in accordance with the Rules. The materials and workmanship are sound and good. The Boiler tested by hydraulic pressure and with the engines secured on board and tested under steam. They are now in good order and safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of LMC 10.14 in the Register book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 10.14.

The amount of Entry Fee ... £ 1 : : When applied for, 28/10/14  
Special ... £ 11 : 5 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ 2 : : When received, 31.10.14

Committee's Minute FRI OCT 23 1914

Assigned + LMC 10.14

MACHINERY CERTIFICATE WRITTEN.



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