

REPORT ON MACHINERY.

No. 27544

Received at London Office WED. JUN. 3-1914
Date, First Survey Jan 15th Last Survey May 25th 1914
Port of Hull

Writing Report 22nd May 1914 When handed in at Local Office 28-5-14

Survey held at Hull
Book on the steel Se K "BARLE."

Built at Selby By whom built Cochrane & Sons Ltd Tons Gross 283 Net 120
When built 1914.

Machinery made at Hull By whom made Amos & Smith Ltd when made 1914.

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Registered Horse Power Owners G.W. & H.B. Jeffe Port belonging to Grimsby

Horse Power as per Section 28 87 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
of Cylinders 13, 22 1/2, 37 Length of Stroke 24 Revs. per minute Dia. of Screw shaft as per rule 7.68 as fitted 8 1/2 Material of screw shaft S.I.

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

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

shafts are fitted, is the shaft lapped or protected between the liners Length of stern bush 3-0

Dia. of Tunnel shaft as per rule 6.7 as fitted 7 3/8 Dia. of Crank shaft journals as per rule 7.1 as fitted 7 1/2 Dia. of Crank pin 7 1/2 Size of Crank webs 4 3/4 x 4 3/4 of thrust shaft under

bars 7 1/2 Dia. of screw 9-6 Pitch of Screw 4-0 No. of Blades 4 State whether moveable no Total surface 33 1/2

of Feed pumps 1 Diameter of ditto 3 Stroke 12 Can one be overhauled while the other is at work

of Bilge pumps 1 Diameter of ditto 3 Stroke 12 Can one be overhauled while the other is at work

of Donkey Engines 1 Sizes of Pumps 6 1/4 x 4 3/4 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 2-2 One forward, one aft In Holds, &c. 4-2 Fore peak, Fishroom

Forward Slushwell, Aft Slushwell, 2 ejector from all bilges

of Bilge Injections 1 sizes 3 Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 2 ejector

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

How are they protected Hold suction, Wood casing

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 13.3.14. of Stern Tube 13.3.14. Screw shaft and Propeller 13.3.14.

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

MILERS, &c.—(Letter for record S. Manufacturers of Steel The Phoenix Co Harde

Total Heating Surface of Boilers 1484 Is Forced Draft fitted No. and Description of Boilers One single-ended

Working Pressure 200 lbs. Tested by hydraulic pressure to 400 lbs. Date of test 27.4.14. No. of Certificate 2080.

Can each boiler be worked separately Area of fire grate in each boiler 48.2 No. and Description of Safety Valves to

each boiler 2-Spring loaded Area of each valve 4.9 Pressure to which they are adjusted 205 lbs. Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 7 1/2 EXT Mean dia. of boilers 13-6 Length 10-6 Material of shell plates S

Thickness 1/32 Range of tensile strength 29-33 Are the shell plates welded or flanged Descrip. of riveting: cir. seams DR Lap

Long. seams 10 BS rivets Diameter of rivet holes in long. seams 1/32 Pitch of rivets 8 1/4 Lap of plates or width of butt straps 17 3/4

Percentages of strength of longitudinal joint rivets 91.5 plate 88.2 Working pressure of shell by rules 202. Size of manhole in shell 16 x 12

Size of compensating ring 40 x 30 x 1 3/2 No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 3-4 1/8

Length of plain part top 80.5 bottom 76 Thickness of plates crown 13 bottom 16 Description of longitudinal joint welded No. of strengthening rings One

Working pressure of furnace by the rules 203. Combustion chamber plates: Material S Thickness: Sides 3/32 Back 1/16 Top 23/32 Bottom 23/32

Pitch of stays to ditto: Sides 8 1/2 x 9 1/2 Back 8 1/4 x 9 Top 9 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 219

Material of stays S Area Diameter at smallest part 2.06 Area supported by each stay 80.75 Working pressure by rules 230 End plates in steam space:

Material S Thickness 1/8 Pitch of stays 17 x 17 1/4 How are stays secured Nuts & Washers Working pressure by rules 230 Material of stays S

Area Diameter at smallest part 7.24 Area supported by each stay 295.25 Working pressure by rules 250 Material of Front plates at bottom S

Thickness 1 Material of Lower back plate S Thickness 7/8 Greatest pitch of stays 13 1/4 x 9 Working pressure of plate by rules 200

Diameter of tubes 3 1/2 Pitch of tubes 4 1/8 x 4 1/4 Material of tube plates S Thickness: Front 1 Back 7/8 Mean pitch of stays 9 1/2 x 12 1/16

Pitch across wide water spaces 15 3/4 Working pressures by rules 277 Girders to Chamber tops: Material S Depth and

thickness of girder at centre 9 x 1 3/4 Length as per rule 2-9 3/16 Distance apart 8 1/2 Number and pitch of stays in each 30-8 1/2

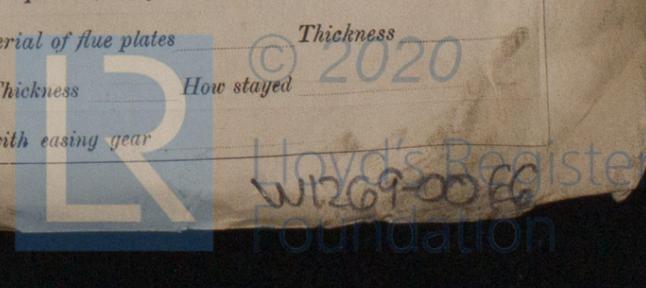
Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked

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



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: - Two each top & bottom end connecting rod bolts nuts, Two main bearing balls nuts, One set each feed & bilge valves, A quantity of assorted bolts nuts, Iron of various sizes. & 1 set of coupling bolts see Hull Ltr 6/6/14. JWD

The foregoing is a correct description,

FOR AMOS & SMITH LTD.

J. Mackillop Manufacturer.

Dates of Survey while building: During progress of work in shops - 1914 - Jan 15, 27, Feb 5, Mar 9, 10, 11, 13, 17, 23, 30, Apr 1, 27, 29, 30, May 1, 4, 12; During erection on board vessel - May 13, 14, 20, 25; Total No. of visits - 21

Is the approved plan of main boiler forwarded herewith? yes

Dates of Examination of principal parts: Cylinders 1.4.14, Slides 1.4.14, Covers 29.4.14, Pistons 1.5.14, Rods 1.5.14, Connecting rods 1.5.14, Crank shaft 27.4.14, Thrust shaft 27.4.14, Tunnel shafts, Screw shaft 11.3.14, Propeller 11.3.14, Stern tube 11.3.14, Steam pipes tested 14.5.14, Engine and boiler seatings 13.3.14, Engines holding down bolts 12.5.14, Completion of pumping arrangements 12.5.14, Boilers fixed 12.5.14, Engines tried under steam 20.5.14, Main boiler safety valves adjusted 10.5.14, Thickness of adjusting washers PV 9/32 SV 9/32, Material of Crank shaft S, Identification Mark on Do. 1213, Material of Thrust shaft S, Identification Mark on Do. 1213, Material of Tunnel shafts, Identification Marks on Do., Material of Screw shafts S, Identification Marks on Do. 1213, 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? yes If so, state name of vessel S.S. "Dane"

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 5.14. in the Register book.

It is submitted that this vessel is eligible for THE RECORD, + LMC 5.14.

JWD 4/6/14 JRS

The amount of Entry Fee ... £ 1 : : When applied for, Special ... £ 13 : 10 2/6/14 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : 8 2 30/6/14

J. G. Mackillop, Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI. JUN. 5 - 1914

Assigned + LMC 5.14

MACHINERY CERTIFICATE WRITTEN

