

REPORT ON MACHINERY.

No. 73844
TUE. NOV. 23 1920

Received at London Office

Date of writing Report 18th Nov 1920 When handed in at Local Office 18th Nov 1920 Port of Amantle on Tyne
No. in Survey held at Jarrow & Hebburn Date, First Survey June 18th 1919 Last Survey 13th Nov 1920
Reg. Book. 72270 on the S. S. Silene (Number of Visits) Tons { Gross 5019 Net 2109
Master Built at Hebburn By whom built Palmers & B. Iron Co Ltd When built 1920
Engines made at Jarrow By whom made Palmers Shipbuilding & Iron Co Ltd when made 1920
Boilers made at do By whom made do when made 1920
Registered Horse Power Owners Soc "Les Affreteurs Reunis" Port belonging to Rouen
Nom. Horse Power as per Section 28 453 Is Refrigerating Machinery fitted for cargo purposes do Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 26" 43" 71" Length of Stroke 48" Revs. per minute 74 Dia. of Screw shaft as per rule 4 7/8" Material of screw shaft as fitted 15 7/8" Steel
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 Resin If two liners are fitted, is the shaft lapped or protected between the liners Length of stern bush 5-1/2"
Dia. of Tunnel shaft as per rule 13 5/8" Dia. of Crank shaft journals as per rule 13 5/8" Dia. of Crank pin 13 7/8" Size of Crank web 9 1/2" x 19 7/8" Dia. of thrust shaft under collars 13 7/8" Dia. of screw 18-3" Pitch of Screw 16-9" No. of Blades 4 State whether moveable do Total surface 92 sq ft
No. of Feed pumps 2 Hairs Diameter of ditto 9 1/2" x 7" Stroke 24" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work yes
No. of Donkey Engines 1 Sizes of Pumps 7 1/2" x 4 1/2" x 10" & 5" x 10" x 10" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 4, 3 1/2" diameter In Holds, 4, 3 1/2" in No. 1, 3 1/2" in (2 & 3 combined hold) 2, 3 1/2" in No. 4, one 3 1/2" in No. 5 and one 3" in tunnel well.
No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes
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 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 None How are they protected ✓
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 yes Is it fitted with a watertight door yes worked from E.R. top platform

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel J. Spencer & Sons Ltd
Total Heating Surface of Boilers 8007 sq ft Is Forced Draft fitted do No. and Description of Boilers 3, Single Ended
Working Pressure 180 lb per sq in Tested by hydraulic pressure to 360 lb per sq in Date of test (1) 4/6/20 (2) 17/6/20 No. of Certificate (1) 9415 (2) 9423
Can each boiler be worked separately yes Area of fire grate in each boiler 220 sq ft No. and Description of Safety Valves to each boiler 2 direct opening Area of each valve 8.29 sq in Pressure to which they are adjusted 185 lb per sq in Are they fitted with easing gear yes
Smallest distance between boilers or uptakes and bunkers or woodwork 20" Mean dia. of boilers 16-7" Length 11-0" Material of shell plates Steel
Thickness 1 1/32" Range of tensile strength 25/32 ton Are the shell plates welded or flanged do Descrip. of riveting: cir. seams 2 R top long. seams 5 rivets Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 1/4" Lap of plates or width of butt straps 20/16
Per centages of strength of longitudinal joint rivets 59-1 plate 80-2 Working pressure of shell by rules 183 lb Size of manhole in shell 16" x 12"
Size of compensating ring 33 3/8" x 17 1/2" No. and Description of Furnaces in each boiler 3, Monium Material Steel Outside diameter 55 1/2"
Length of plain part top 3 5/8" bottom 3 5/8" Thickness of plates crown 3 5/8" Description of longitudinal joint Welded No. of strengthening rings 1
Working pressure of furnace by the rules 181 Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 2 1/32" Top 11/16" Bottom 1 1/8"
Pitch of stays to ditto: Sides 9 1/2" x 9 1/2" Back 8 1/2" x 9 1/2" Top 9 1/2" x 9 1/2" If stays are fitted with nuts or riveted heads nuts in Working pressure by rules 180 lb
Material of stays Steel Area at smallest part 1.73 sq in Area supported by each stay 90.25 sq in Working pressure by rules 181 lb End plates in steam space: Material Steel Thickness 1 1/8" Pitch of stays 20 x 16" How are stays secured Double nuts Working pressure by rules 183 Material of stays Steel
Area at smallest part 5.56 sq in Area supported by each stay 320 sq in Working pressure by rules 180 Material of Front plates at bottom Steel
Thickness 1" Material of Lower back plate Steel Thickness 29/32" Greatest pitch of stays 14 1/2" x 9 1/2" Working pressure of plate by rules 185
Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 3/8" Material of tube plates Steel Thickness: Front 1" Back 13/16" Mean pitch of stays 11 1/8"
Pitch across wide water spaces 14 1/2" Working pressures by rules 183 lb Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 1/2" x 1 1/4" Length as per rule 33 7/8" Distance apart 9" Number and pitch of stays in each Three, 9 1/2"
Working pressure by rules 182 lb Steam dome: description of joint to shell None % 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 None Date of Approval of Plan ✓ Tested by Hydraulic Pressure ✓
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 ✓

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:—

2 top end, 2 bottom end, 2 main bearing and 6 coupling bolts & nuts, one set of feed pump and one set of bilge pump valves, relief valve springs for each escape valve on cylinders, one set of safety valve springs, 5 1/2" plain boiler tubes, 1 1/2" condenser tubes, one pair bottom end bushes, one set HP piston rings, one propeller, a few bars of iron and plates, assorted bolts & nuts etc.

The foregoing is a correct description,

Palmer's Shipbuilding & Iron Co., Ltd.

D. Kemp.

Manufacturer.

General Manager, Engine Works.

Dates of Survey while building
During progress of work in shops -- 1919 June 18, 25. Aug. 6. Sept. 2, 14, 24. Oct. 9. Dec. 18. 1920 Jan. 9, 21, 30. Feb. 11. Mar. 1, 5, 10, 12, 23, 25, 31. Apr. 1.
During erection on board vessel -- 6, 15, 21, 30. May 5, 6, 13, 17, 26. June 1, 4, 8, 10, 17. July 7, 13, 16, 19, 20, 22, 26, 29, 29. Aug. 3, 5, 6, 9, 11, 13.
Total No. of visits 14, 18, 19, 26, 27, 30, 44, 6, 2, 10, 13, 14, 16, 14, 20, 21, 23, 28, 30. Is the approved plan of main boiler forwarded herewith? yes

Dates of Examination of principal parts—Cylinders 5/6 7/7/20 Slides 5/5 7/7/20 Covers 10/3 7/7/20 Pistons 30/2 8/6/20 Rods 10/3 1/4 7/7/20
Connecting rods 10/3 1/4 7/7/20 Crank shaft 1/6 7/7/20 Thrust shaft 5/5 7/7/20 Tunnel shafts 1/3 5/3 23/3/20 Screw shaft 1/6 14/7/20 Propeller 14/7 30/7/20
Stern tube 30/2 14/7/20 Steam pipes tested 26/5 27/5 28/5 19/10/20 Engine and boiler seatings 11/8/20 Engines holding down bolts 3/11 12/11/20
Completion of pumping arrangements 13/11/20 Boilers fixed 30/9/20 Engines tried under steam 13/11/20
Completion of fitting sea connections 15/8/20 Stern tube 15/8/20 Screw shaft and propeller 30/9/20
Main boiler safety valves adjusted 3/11/20 Thickness of adjusting washer Port B 15/32, 17/32 for B 3/5 + 3/8. Star B 3/32, 13/32
Material of Crank shaft Steel Identification Mark on Do. 13/8/20 Material of Thrust shaft Steel Identification Mark on Do. 13/8/20
Material of Tunnel shafts do Identification Marks on Do. do Material of Screw shafts do Identification Marks on Do. do
Material of Steam Pipes Steel & Copper Test pressure 540 + 360 lb per sq. in. respectively
Is an installation fitted for burning oil fuel? yes Is the flash point of the oil to be used over 150°F? yes

Have the requirements of Section 49 of the Rules been complied with?

Is this machinery duplicate of a previous case?

Same as SS "Baechus" excepting that the Silene is fitted for oil burning.

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

The machinery of this vessel has been built under special survey, the materials and workmanship are of good quality, it has been securely fitted on board and a satisfactory full speed trial run in the North Sea. The machinery of this vessel is now in my opinion eligible for entry in L.M.C. 11.20 (in oil) and fitted for oil fuel burning above 150° Fahr. in the register book.

Boiler plan, invoices for steel, forging & casting & steam pipe reports are now forwarded.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 11.20

Fitted for Oil Fuel 11.20 FP ABOVE 150°F.

Roll. 25/11/20

ARK

The amount of Entry Fee ... £ 3 : 0 :
Special ... £ 42 : 13 :
Donkey Boiler Fee ... £ : ✓ :
Travelling Expenses (if any) £ : ✓ :

When applied for,

12 NOV 1920

When received,

28.12.20

Committee's Minute

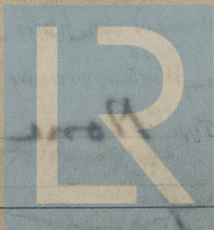
TUE. NOV. 30 1920

Assigned

+ L.M.C. 11.20

Fitted for oil fuel 11.20

CERTIFICATE WRITTEN



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