

REPORT ON MACHINERY.

No. 72850.

SAT. 6-MAR. 1920

Received at London Office

of writing Report 5th March 20 When handed in at Local Office 5th March 20 Port of NEWCASTLE-ON-TYNE

in Survey held at Janon & Shields Date, First Survey Last Survey 19

908 on the S.S. Seattle (Number of Visits)

ster Built at Newcastle By whom built Wood Skinner & Co Ltd Tons Gross 5133 Net 3185

ines made at Newcastle By whom made R & E Mac Eng Co Ltd When built 1911

ilers made at do By whom made do when made 1911

gistered Horse Power Owners Union of Government of S. Africa Port belonging to London

n. Horse Power as per Section 28 516. Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

GINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks 3

of Cylinders 27, 45 & 74 Length of Stroke 48 Revs. per minute 74 Dia. of Screw shaft as per rule 14 1/2 Material of Iron

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

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

ers are fitted, is the shaft lapped or protected between the liners Length of stern bush 61"

of Tunnel shaft as per rule 13 1/2 Dia. of Crank shaft journals as per rule 14 1/2 Dia. of Crank pin 14 1/2 Size of Crank webs 51 1/2 x 25 1/2 x 9"

Bars 14 1/8 Dia. of screw 15-0 Pitch of Screw 15-0 No. of Blades 4 State whether moveable No Total surface 95 sq ft

of Feed pumps 2 Diameter of ditto 4" Stroke 26" Can one be overhauled while the other is at work yes

of Bilge pumps 2 Diameter of ditto 4" Stroke 26" Can one be overhauled while the other is at work yes

of Donkey Engines Four Sizes of Pumps 10 x 10 1/2 x 10" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Four 3 1/2" Double Suctions 9 1/2" x 7 1/2" In Holds, &c. No 3 1/2" in No 1, 2 & 3

at one 3 1/2" in tunnel well.

of Bilge Injections sizes 8" Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size yes 3 1/2"

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

all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both

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

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

all pipes are carried through the bunkers forward Bilge pipes How are they protected Hood boxing

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes.

the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes.

Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Engine room top platform

YLLERS, &c.—(Letter for record) S Manufacturers of Steel J. Spencer & Sons Ltd

ul Heating Surface of Boilers 7503 sq ft Is Forced Draft fitted yes No. and Description of Boiler 3 Single Cooled

Pressure 180 lb per sq in tested by hydraulic pressure to 270 lb per sq in Date of test 20/2/20 No. of Certificate None

each boiler be worked separately yes Area of fire grate in each boiler 55 sq ft No. and Description of Safety Valves to

one, direct spring Area of each valve 962 sq in Pressure to which they are adjusted 185 lb per sq in Are they fitted with easing gear yes

distance between boilers or uptakes and bunkers or woodwork 7-0" Mean dia. of boilers 14 9/16 Length 12-0 Material of shell plates Steel

7/32 Range of tensile strength 28 3/4 min Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 2 R Lef

Double Butt Straps Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 9" Lap of plates or width of butt straps 16 1/2"

of strength of longitudinal joint rivets 86-1 Working pressure of shell by rules 201 lb Size of manhole in shell 16" x 12"

of compensating rings 14 1/2 x 10 1/2 x 1 1/2 No. and Description of Furnaces in each boiler 3, Monitors Material Steel Outside diameter 44 1/2"

of plain part top Thickness of plates crown 1 1/2 Description of longitudinal joint Welded No. of strengthening rings None

pressure of furnace by the rules 182 Combustion chamber plates: Material Steel Thickness: Sides 23/32 Back 23/32 Top 23/32 Bottom 1"

stays to ditto: Sides 10 3/2 x 9 3/2 Back 10 x 8 1/2 Top 10 3/2 x 9 3/2 stays are fitted with nuts or riveted heads (Nuts) Working pressure by rules 180 lb

of stays Steel Area at smallest part 2.03 sq ft Area supported by each stay 97 1/2 Working pressure by rules 157 End plates in steam space:

Material Steel Thickness 1 9/16 Pitch of stays 26 3/8 x 24 How are stays secured Double nuts Working pressure by rules 182 Material of stays Steel

at smallest part 9.5 sq ft Area supported by each stay 6330 Working pressure by rules 150 Material of Front plates at bottom Steel

Material of Lower back plate Steel Thickness 2 9/32 Greatest pitch of stays 14 1/2 Working pressure of plate by rules 182

of tubes 2 1/2 Pitch of tubes 3 3/4 Material of tube plates Steel Thickness: Front 1" Back 13/16 Mean pitch of stays 7 1/2

across wide water spaces 14 1/2 Working pressures by rules 191 Girders to Chamber tops: Material Steel Depth and

ness of girder at centre 9 1/2 x 1 7/8 Length as per rule 3-0 Distance apart 9 3/8 Number and pitch of stays in each No, 10 1/2"

Working pressure by rules 181 lb Steam dome: description of joint to shell None % of strength of joint

meter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

of rivets Working pressure of shell by rules Crown plates Thickness How stayed

ERHEATER. Type None Date of Approval of Plan Tested by Hydraulic Pressure to

of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

meter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

TUES. 29 JUL 1924

9120 6 00 7149 0216



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:

One top & 2 bottom end bolts & nuts, one set of coupling bolts & nuts, 2 main bearing bolts & nuts, one set of fuel & bilge pump valves, a quantity of assorted bolts & nuts, a few bars iron, one set of bottom end bushes, a propeller shaft and a propeller, etc.

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

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 22/1/20 Slides 22/1/20 Covers 22/1/20 Pistons 22/1/20 Rods 22/1/20

Connecting rods 22/1/20 Crank shaft 22/1/20 Thrust shaft 22/1/20 Tunnel shafts 22/1/20 Screw shaft 2/2/20 Propeller 2/2/20

Stern tube 2/2/20 Steam pipes tested 10/2/20 Engine and boiler seatings 16/2/20 Engines holding down bolts 22/1/20

Completion of pumping arrangements 26/2/20 Boilers fixed 22/1/20 Engines tried under steam 27/2/20

Completion of fitting sea connections 2/2/20 Stern tube 2/2/20 Screw shaft and propeller 2/2/20

Main boiler safety valves adjusted 26/2/20 Thickness of adjusting washers PB 5/16 5/16 C B 3/32 7/16 SB 5/16

Material of Crank shaft Steel Identification Mark on Do. ✓ Material of Thrust shaft Steel Identification Mark on Do. ✓

Material of Tunnel shafts Steel Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. ✓

Material of Steam Pipes Iron or Steel (not Kmm) Test pressure 540 lb per sq. in.

Is an installation fitted for burning oil fuel No ✓ 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 machinery of this vessel

has not been constructed under special survey, but it has now been opened out, examined and the necessary measurements taken for this report, the centre boiler has had a test hole drilled in every plate and the thicknesses of the plates and the diameters of the stay bars were found to be in accordance with the approved plans. The port & starboard boilers have now been fitted with new Morrison furnaces and new plain tubes and the centre boiler with new plain tubes and on completion of the repairs, the boilers were tested by hydraulic pressure to 270 lb per sq. in. (1½ times WP) and were found tight & sound at that pressure.

In my opinion the machinery of this vessel is now eligible for record L.M.C. 2-20, propeller shaft 2-20, 180 lb. F.D. H. 2503 G.S. 55 lb in the register book.

Boiler plan, pumping plan, plan of shafting & new furnaces now forward

The amount of Entry Fee ... £ : : When applied for, 19.  
Special See Ltr. attached £ 30 : :  
Donkey Boiler Fee ... £ : : When received, 10/4/1920  
Travelling Expenses (if any) £ : : 12

Committee's Minute

Assigned

FRI. 4 SEP 1925

George Murdoch

Engineer Surveyor to Lloyd's Register of Shipping

FRI. 14 SEP 1925

FRI. 17 OCT

FRI. OCT. 15 1920

TUE. 14 JUN. 1921

FRI. 1920

TUE. 19 DEC. 1922

FRI. 17 AUG. 1923

FRI. MAR. 11 1921

FRI. APR. 27 1923

THU. 13 APR. 1922

Certificate (if required) to be sent to

The Surveyors are requested not to write over below the space for Committee's Minute.

MACHINERY CERTIFICATE

Lloyd's Register of Shipping Foundation