

REPORT ON MACHINERY.

Received at London Office TUE: JUL. 6 1920

Date of writing Report 19 When handed in at Local Office = 5 JUL 1920 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 23 Oct 1919 Last Survey 19
 Reg. Book. on the 75 "Winsum." (Number of Visits)

Master _____ Built at Hoboken By whom built Antwerp Engineering Co. Ltd (No 74) When built 1920

Engines made at Sunderland By whom made North Eastern Marine Engineering Co. Ltd (No 2178) When made 1920

Boilers made at Sunderland By whom made North Eastern Marine Engineering Co. Ltd (No 2178) When made 1920

Registered Horse Power _____ Owners _____ Port belonging to _____

Nom. Horse Power as per Section 28 320 Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 23.38.62 Length of Stroke 42 Revs. per minute 68 Dia. of Screw shaft as per rule 13.1 Material of Scraper
 as fitted 13.4 screw shaft

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 yes If two liners are fitted, is the shaft lapped or protected between the liners _____ Length of stern bush 4-5

Dia. of Tunnel shaft as per rule 11.47 11.49 Dia. of Crank shaft journals as per rule 12.05 12.06 Dia. of Crank pin 12.4 Size of Crank webs 17x7.5 Dia. of thrust shaft under collars 12.4 Dia. of screw 16-3 Pitch of Screw 16-0 No. of Blades 4 State whether moveable no Total surface 810ft

No. of Feed pumps 2 Diameter of ditto 3.4 Stroke 2-0 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4 Stroke 2-0 Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 10 & 12 + 12. 7 & 5 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room _____ In Holds, &c. _____

No. of Bilge Injections _____ sizes _____ Connected to condenser, or to circulating pump _____ Is a separate Donkey Suction fitted in Engine room & size _____

Are all the bilge suction pipes fitted with roses _____ Are the roses in Engine room always accessible _____ Are the sluices on Engine room bulkheads always accessible _____

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

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates _____ Are the Discharge Pipes above or below the deep water line _____

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel _____ Are the Blow Off Cocks fitted with a spigot and brass covering plate _____

What pipes are carried through the bunkers _____ How are they protected _____

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

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

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

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

Total Heating Surface of Boilers 44960ft Is Forced Draft fitted yes No. and Description of Boilers Two single ended marine

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 21-5-20 No. of Certificate 3690

Can each boiler be worked separately _____ Area of fire grate in each boiler 530ft No. and Description of Safety Valves to each boiler Two direct spring Area of each valve 9.620" Pressure to which they are adjusted _____ Are they fitted with easing gear _____

Smallest distance between boilers or uptakes and bunkers or woodwork _____ Mean dia. of boilers 14.45" Length 11-6" Material of shell plates steel

Thickness 1.32" Range of tensile strength 29-33tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR long. seams DRS. TR Diameter of rivet holes in long. seams 1.2" Pitch of rivets 9.9/16" Lap of plates or width of butt straps 19"

Per centages of strength of longitudinal joint rivets 87.8 plate 86.9 Working pressure of shell by rules 180 Size of manhole in shell 10" x 12"

Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Deighton Material Steel Outside diameter 3-5.5"

Length of plain part top _____ bottom _____ Thickness of plates crown 1.1" bottom 1.2" Description of longitudinal joint welded No. of strengthening rings _____

Working pressure of furnace by the rules 181 Combustion chamber plates: Material Steel Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 3/4"

Pitch of stays to ditto: Sides 10.5/8 x 9.2" Back 10.5/8 x 10.5/8" Top 10.5/8 x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180

Material of stays steel Area at smallest part 2.030" Area supported by each stay 1010" Working pressure by rules 181 End plates in steam space: Material steel Thickness 1.3" Pitch of stays 25 x 19" How are stays secured DN & W Working pressure by rules 181 Material of stays steel

Area at smallest part 8290" Area supported by each stay 4750" Working pressure by rules 181 Material of Front plates at bottom steel Thickness 1.3" Material of Lower back plate steel Thickness 1.5" Greatest pitch of stays 14.7/8 x 10.5/8" Working pressure of plate by rules 182

Diameter of tubes 2.5" Pitch of tubes 3.3/4 x 3.3/4" Material of tube plates steel Thickness: Front 1.3/16" Back 3/4" Mean pitch of stays 9.3/8"

Pitch across wide water spaces 14.5/8 (5/8 UP) Working pressures by rules 216 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2 @ 8.5/8 x 1" Length as per rule 35" Distance apart 9" Number and pitch of stays in each 2 @ 10.3/8"

Working pressure by rules 183 Steam dome: description of joint to shell none % of strength of joint _____

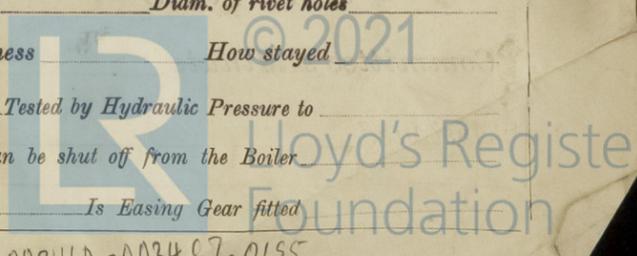
Diameter _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet holes _____

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

UPERHEATER. Type _____ Date of Approval of Plan _____ Tested by Hydraulic Pressure to _____

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:—

ospi (A-91210) ...
ospi (811571) ...
ospi (011271) ...

The foregoing is a correct description,

Geo. D. Beer 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 yes
" " " donkey " " " no

Dates of Examination of principal parts—Cylinders 16-1-20 Slides 9-4-20 Covers 24-3-20 Pistons 12-4-20 Rods 12-4-20

Connecting rods 24-3-20 Crank shaft 8-1-20 Thrust shaft 1-5-20 Tunnel shafts 24-3-20 Screw shafts 2-7-20 Propeller 5-5-20

Stern tube 4-3-20 Steam pipes tested Engine and boiler seatings Engines holding down bolts

Completion of pumping arrangements Boilers fixed Engines tried under steam

Completion of fitting sea connections Stern tube Screw shaft and propeller

Main boiler safety valves adjusted Thickness of adjusting washers

Material of Crank shaft Steel Identification Mark on Do. LLOYD'S N°2178 L.C.D. Material of Thrust shaft Steel Identification Mark on Do. LLOYD'S N°2178 L.C.D.

Material of Tunnel shafts Superior Identification Marks on Do. L.C.D. Material of Screw shafts Superior Identification Marks on Do. L.C.D.

Material of Steam Pipes Test pressure

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 machinery is being sent to Antwerp to be fitted in the vessel.
The materials and workmanship are good.
The machinery has been constructed under special survey and will, in my opinion, be eligible for classification and the record of L.M.C. (with date) when it has been satisfactorily fitted in the vessel.

SUNDERLAND.

Certificate (if required) to be sent to

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

The amount of Entry Fee ... £ 3 :
Special Fee ... £ 24 :
Donkey Boiler Fee ... £ 12 :
Travelling Expenses (if any) £ :
When applied for, 5 JUL 1920
When received, 7 8 19 20

S. Davis
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. MAR. 18 1921
Assigned See minute on Ant rpt No 11502

