

## REPORT ON MACHINERY.

No. 84664

Received at London Office 21 SEP 1921

Date of writing Report 20.9.1921 When handed in at Local Office 21 SEP 1921 Port of London  
 No. in Survey held at *Uwenhoe* Date, First Survey *Sept. 1st 1921* Last Survey *Oct 5th 1921*  
 Reg. Book. on the *S. S. Bedford Bridge ex "Eikundarund"* (Number of Visits 10)  
 Master Built at *Delfzijl* By whom built *Johs. Bag.* Tons { Gross 397  
 Engines made at — By whom made — when made — Net 188  
 Boilers made at — By whom made — when made —  
 Registered Horse Power Owners *Enslow S. S. Co. Ltd.* Port belonging to *London.*  
 Nom. Horse Power as per Section 28 *66* Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted *no*

## ENGINES, &amp;c.—Description of Engines

*Triple expansion* No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders *19 5/8" - 19 1/2" - 29 1/2"* Length of Stroke *21 1/2"* Revs. per minute *150* Dia. of Screw shaft as per rule *6 3/4"* Material of *Steel*  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube *no liner* Is the after end of the *shaft* 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 or protected between the liners ☒ Length of stern bush ☒  
 Dia. of Tunnel shaft as per rule *6"* Dia. of Crank shaft journals as per rule *6 5/8"* Dia. of Crank pin *6 5/8"* Size of Crank webs *3 15/8"* Dia. of thrust shaft under  
 collars *6 1/8"* Dia. of screw *8 1/4"* Pitch of Screw *12-0"* No. of Blades 4 State whether moveable *no* Total surface *26 f*  
 No. of Feed pumps 1 Diameter of ditto *2 1/8"* Stroke *10 3/4"* Can one be overhauled while the other is at work ☒  
 No. of Bilge pumps 1 Diameter of ditto *2 1/2"* Stroke *10 3/4"* Can one be overhauled while the other is at work ☒  
 No. of Donkey Engines 2 Sizes of Pumps *4 x 2 1/2 x 4* } Duplex. No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room 3 *Two 2 1/2" & 3 1/4" dia.* In Holds, &c. *Three 3 1/2" dia.*

No. of Bilge Injections 1 sizes *2 1/4"* Connected to condenser, or to circulating pump *yes* Is a separate Donkey Suction fitted in Engine room & size *Yes. 3"*  
 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*  
 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 ☒ Is it fitted with a watertight door ☒ worked from ☒

## BOILERS, &amp;c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers *1303 f* Is Forced Draft fitted *no* No. and Description of Boilers *One single ended.*  
 Working Pressure *185 lb* Tested by hydraulic pressure to — Date of test — No. of Certificate ☒  
 Can each boiler be worked separately ☒ Area of fire grate in each boiler *43 f* No. and Description of Safety Valves to  
 each boiler *2 Spring loaded* Area of each valve *4 1/4"* Pressure to which they are adjusted *185 lb* Are they fitted with easing gear *Yes*  
 Smallest distance between boilers or uptakes and bunkers or woodwork *8"* Mean dia. of boilers *11-9 1/2"* Length *10-5 1/2"* Material of shell plates *Steel*  
 Thickness *1 1/8"* Range of tensile strength ☒ Are the shell plates welded or flanged *no* Descrip. of riveting: cir. seams *D. R. Lap*  
 long. seams *T. R. butt* Diameter of rivet holes in long. seams *1"* Pitch of rivets *7"* Lap of plates or width of butt straps *15 1/4"*  
 Per centages of strength of longitudinal joint plate Working pressure of shell by rules *185 lb* Size of manhole in shell *16 x 11"*  
 Size of compensating ring *6" x 1" thick* No. and Description of Furnaces in each boiler *2. Boringated* Material *Steel* Outside diameter *3' 10"*  
 Length of plain part top ☒ Thickness of plates bottom *1 1/8"* Description of longitudinal joint *Welded* No. of strengthening rings ☒  
 Working pressure of furnace by the rules *247* Combustion chamber plates: Material *Steel* Thickness: Sides *1/2"* Back *1/2"* Top *1/2"* Bottom *1/2"*  
 Pitch of stays to ditto: Sides *10" x 7"* Back *6 1/2" x 7"* Top *8 1/2"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules  
 Material of stays *Steel* Area at smallest part *1 1/2"* Area supported by each stay *46.37 f* Working pressure by rules End plates in steam space:  
 Material *Steel* Thickness *1 1/8"* Pitch of stays *18 1/2" x 15"* How are stays secured *Nuts & Washers* Working pressure by rules Material of stays *Steel*  
 Area at smallest part *2 3/4"* Area supported by each stay *273.75 f* Working pressure by rules Material of Front plates at bottom *Steel*  
 Thickness *1 1/8"* Material of Lower back plate *Steel* Thickness *1 1/8"* Greatest pitch of stays *13 1/4" x 7"* Working pressure of plate by rules  
 Diameter of tubes *3 5/8"* Pitch of tubes *4 1/2" x 4 1/2"* Material of tube plates *Steel* Thickness: Front *1 1/8"* Back *1/2"* Mean pitch of stays *9"*  
 Pitch across wide water spaces *17" 11 1/2"* Working pressures by rules Girders to Chamber tops: Material *Steel* Depth and  
 thickness of girder at centre *7 1/4" x 1 3/4"* Length as per rule *24' 25"* Distance apart *8 1/2"* Number and pitch of stays in each *2.*  
 Working pressure by rules Steam dome: description of joint to shell ☒ % 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

Date of Approval of Plan

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

Tested by Hydraulic Pressure to

Is Easing Gear fitted

Lloyd's Register  
Foundation

51205-0215



IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:—

*3 Connecting rods top end bolts nuts*  
*2 " " " " " "*  
*2 Main bearing bolts nuts*  
*1 set coupling bolts nuts*  
*1 set feed valve pump valves*  
*1 set of piston springs. The quantity of bolts nuts.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey *1921: Aug 29. Sep. 1. 2. 12. 14 21. 23 Oct 3<sup>rd</sup> 5*  
During progress of work in shops --  
During erection on board vessel --  
Total No. of visits *Ten*

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders		Slides	Covers	Pistons	Rods
Connecting rods	Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft	Propeller
Stern tube	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	Identification Mark on Do.	Material of Thrust shaft	Identification Mark on Do.		
Material of Tunnel shafts	Identification Marks on Do.	Material of Screw shafts	Identification Marks on Do.		
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		If so, state name of vessel			
Is this machinery duplicate of a previous case					

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

*The Engines & boiler of this vessel opened up & examined. Workmanship and material good. Dimensions verified as far as practicable. This information is submitted for the Committee with a view to being classed with this Society.*

Certificate (if required) to be sent to  
Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £	:	:	When applied for,
Special ... £	:	:	19
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	19

Committee's Minute

TUE. NOV. 8 1921

TUE. 13 DEC. 1921

*A. E. Farmer*

Engineer Surveyor to Lloyd's Register of Shipping.



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