

# REPORT ON MACHINERY

No. 41,734

Date of writing Report 11 Dec 1919 When handed in at Local Office 11 Dec 1919 Port of **CARDIFF**

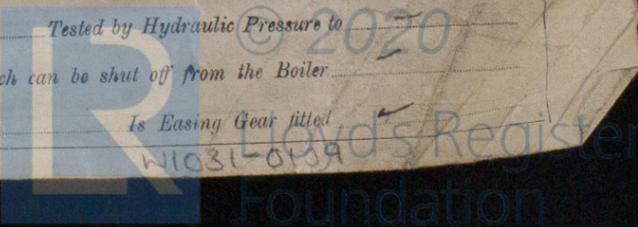
No. in Survey held at **Cardiff** Date, First Survey 21<sup>st</sup> October Last Survey 1<sup>st</sup> December 1919  
Reg. Book. 26645 on the S.S. "Slikkerman" now "Ualan" (Number of Visits 8)

Master Built at **Slikkerman**. By whom built **H. V. Schep "de Maas"** Tons { Gross 471 Net 241  
Engines made at **Hengelo** By whom made **Gebr. Stok** when made 1917  
Boilers made at 1917 By whom made **Do** when made 1917  
Registered Horse Power 43 Owners **Enterprise Shipping Co. Ltd (AB Clearing)** Port belonging to **Cardiff**.  
Nom. Horse Power as per Section 28 71 Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **No**

**ENGINES, &c.**—Description of Engines **Inverted Triple Expansion** No. of Cylinders 3 No. of Cranks 3  
Dia. of Cylinders  $12\frac{9}{16}$  20 $\frac{1}{2}$  31 $\frac{1}{2}$  Length of Stroke 19 $\frac{3}{8}$  Revs. per minute 155 Dia. of Screw shaft as per rule 6 $\frac{1}{4}$  Material of screw shaft **Steel**  
Is the screw shaft fitted with a continuous liner the whole length of the stern tube **No** Is the after end of the liner made water tight in the propeller boss **Rubber** 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 **Lapped & coated** Length of stern bush 2'-4"  
Dia. of Tunnel shaft as per rule **None** Dia. of Crank shaft journals as per rule 6 $\frac{1}{4}$  Dia. of Crank pin 6 $\frac{1}{4}$  Size of Crank webs 10 $\frac{1}{2}$  x 4 $\frac{1}{2}$  Dia. of thrust shaft under collars 6 $\frac{1}{4}$  Dia. of screw 8 ft Pitch of Screw 8 $\frac{1}{2}$  "sq. ft. No. of Blades 4 State whether moveable **No** Total surface  
No. of Feed pumps 1 Diameter of ditto 3 $\frac{5}{16}$ " Stroke **✓** Can one be overhauled while the other is at work **Yes**  
No. of Bilge pumps 1 Diameter of ditto 3 $\frac{5}{16}$ " Stroke **✓** Can one be overhauled while the other is at work **Yes**  
No. of Donkey Engines 2 Sizes of Pumps 1-4 $\frac{1}{2}$ " 1-4" No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 3 - 2 $\frac{1}{2}$ " dia. **✓** In Holds, &c. **One to each tank & one to each bilge on each side, and one to 7 + A.P. 2 $\frac{1}{2}$ " dia. **✓****

**BOILERS, &c.**—(Letter for record ) Manufacturers of Steel (**Siemens Martin Process**)  
Total Heating Surface of Boilers 1400 sq. ft. **✓** Forced Draft fitted **No** No. and Description of Boilers 1. **Junctimolen (Scotch)**  
Working Pressure 185 lb. Tested by hydraulic pressure to 44 sq. ft. Date of test 16 15.3.18 No. of Certificate 3417  
Can each boiler be worked separately **✓** Area of fire grate in each boiler 414 sq. ft. No. and Description of Safety Valves to each boiler 2. **Direct** Area of each valve 3.1412 Pressure to which they are adjusted **✓** Are they fitted with easing gear **Yes**  
Smallest distance between boilers or uptakes and bunkers or woodwork 30" Mean dia. of boilers 11.9 $\frac{1}{16}$  Length 10.6 $\frac{3}{4}$  Material of shell plates **Steel**  
Thickness 1 $\frac{1}{16}$  Range of tensile strength **✓** Are the shell plates welded or flanged **Flanged** Descrip. of riveting: cir. seams 2ig. 7g. long. seams **Tube** Diameter of rivet holes in long. seams 1 $\frac{3}{16}$ " Pitch of rivets 4 x 8 $\frac{1}{16}$  Lap of plates or width of butt straps 1.5 $\frac{5}{16}$   
Per centages of strength of longitudinal joint rivets 103% plate 85% Working pressure of shell by rules 184.6 Size of manhole in shell 15 $\frac{3}{4}$  x 11 13/16  
Size of compensating ring 7" x 1" flange No. and Description of Furnaces in each boiler 2. **Cr.** Material **Steel** Outside diameter 3.11 $\frac{1}{4}$   
Length of plain part top **Cr.** bottom **Do** Thickness of plates crown 9/16 bottom 5. Description of longitudinal joint **Welded** No. of strengthening rings **None**  
Working pressure of furnace by the rules 183.4 Combustion chamber plates: Material **Steel** Thickness: Sides 3/4 Back 3/4 Top 3/4 Bottom 7/8  
Pitch of stays to ditto: Sides 9 x 8 Back 9 x 7 Top 9 x 8 (If stays are fitted with nuts or riveted heads **Yes** Sides of top Working pressure by rules 210  
Material of stays **Steel** Area at smallest part 994 Area supported by each stay 760 Working pressure by rules 194 End plates in steam space: Material **Steel** Thickness 1/8 Pitch of stays 15 x 15 How are stays secured **3 N + W** Working pressure by rules 187 Material of stays **Steel**  
Area at smallest part 6.49 Area supported by each stay 2250 Working pressure by rules 207 Material of Front plates at bottom **Steel**  
Thickness 1/32 Material of Lower back plate **Steel** Thickness 1/32 Greatest pitch of stays 19 Working pressure of plate by rules  
Diameter of tubes 3" Pitch of tubes 7 3/8 Material of tube plates **Steel** Thickness: Front 1/16 Back 1" Mean pitch of stays 4/8  
Pitch across wide water spaces 15" Working pressures by rules 189 Girders to Chamber tops: Material **Steel** Depth and thickness of girder at centre 6" x 2" Length as per rule **24** Distance apart 9" Number and pitch of stays in each 2  
Working pressure by rules 300.0 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 **None** Date of Approval of Plan **✓** Tested by Hydraulic Pressure to **2020**  
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? *No.*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

*1 Pair Top end bolts & nuts. 1 Pair Bottom end Bolts & nuts. 1 Set Coupling bolts. 1 Pair main bearing bolts. 1 Set Top & Bottom end braces. 1 Air & 1 Circulating pump rods. 2 Feed & 2 Bilge pump valves. 6 Condenser tubes. 4 Boiler tubes. 1 Safety valve spring. 1 Spare Propeller. 1 Valve spindle. 1 Set of pump links. Full complement of tools for engine room (Spanners, blocks etc). A quantity of sundries iron, bolts, nuts etc. All Ejets is fitted in Storehold.*

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 *2*

Is the "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 *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 *Steel* Identification Marks on Do. ✓ Material of Steam Pipes *Copper* Test pressure ✓ 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. If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c. *Vessel placed in dry dock, outside fastenings & propeller examd, all found in good order. Tail shaft drawn in, examd found in good condition, refitted. Examination made of all cylinders, piston, slide valves, pumps, the condenser, sea coasts & valves, bilge & other fixtures, auxiliaries and working parts of machinery: all found in good order and condition. Main boiler examd over all parts, and the scantlings taken. Safety valves & mountings examd & found good.*

The materials and workmanship of the engines and boiler appear to be of a satisfactory nature.

It is submitted that this vessel is eligible for THE RECORD LMC 12.19. subject. See separate endorsement 5.1.20 J.W.D. 23/12/19.

The Pumping Plan has not yet been produced; the Supt. states that it will be sent on at the first opportunity.

The amount of Entry Fee ... £ : : When applied for, Special A. ... £ 10 : : 19... Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 16/21/20

J.E. Hunter, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. JAN. 16 1920* *FRI. 13 FEB. 1920* *FRI. 1 JULY 1920*

Assigned *MACHINERY CERT WRITTEN 13.2.20* *Jan 6 12.19* *TUE. 24 FEB. 1920* *TUE. 21 DEC. 1920* *TUE. JUN. 29 1920*

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

apt. 9. Repo Date of cert No. in Reg. Book. Tonnage Registered Horse Power No. of Main No. of Donkey Steam Press in Main Bo in Donkey Last Rep Partic Periodic cause of account besides dates In dam Decided? Did they Do. If this is not And was part Also was spec Superior to Did he survey Did the survey the survey the survey the survey Has screw sh Has shaft Is the State the di If the survey Gner state Survey Fee Special Dan Travelling Comm Assign

