4.

REPORT ON MACHINERY.

No. 26753

Received at London Office WED. 1 JUL 1908

writing Report June 16th 1908 When handed in at Local Office 27th June 1908. Port of Glasgow

Survey held at Glasgow Date, First Survey 2nd Dec/07 Last Survey June 18th 1908

Book. (Number of Visits 21)

up on the T.S.S. "Helga" Tons { Gross / Net

er Built at Dublin By whom built Dublin Dockyard Co When built 1908

es made at Glasgow By whom made David Rowan & Co when made 1908

s made at do By whom made do when made 1908

tered Horse Power Owners Dept Agr & for Ireland Port belonging to Dublin

Horse Power as per Section 28 140 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

INES, &c.—Description of Engines Twin Screw Triple No. of Cylinders 6 No. of Cranks 6

of Cylinders 12½ - 20 - 32 Length of Stroke 22" Revs. per minute 170 Dia. of Screw shaft as per rule 6·598" as fitted 6 5/8" Material of screw shaft steel

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

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

n the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive — If two

are fitted, is the shaft lapped or protected between the liners — Length of stern bush 2'-6"

f Tunnel shaft as per rule 6·167" as fitted 6¼" Dia. of Crank shaft journals as per rule 6·475" as fitted 6½" Dia. of Crank pin 6½" Size of Crank webs 4¼" Dia. of thrust shaft under

s 6 9/16" Dia. of screw 7'-0" Pitch of Screw 9'-6" No. of Blades 4 State whether moveable No Total surface 15·2 ☐'

f Feed pumps 1 Diameter of ditto 2½" Stroke 11" Can one be overhauled while the other is at work Yes } each Engine.

f Bilge pumps 1 Diameter of ditto 2½" Stroke 11" Can one be overhauled while the other is at work Yes } (2 each in ship)

f Donkey Engines 3 Sizes of Pumps 2¼" × 3½ × 5", 7×4½×10 Fwd Pulsometer No. and size of Suctions connected to both Bilge and Donkey pumps

ngine Room 1 - 2" In Holds, &c. 1 - 2" Tunnel 1 - 2"

W.T. flat 1 - 2"

Bilge Injections 1 sizes 3 3/4" Connected to condenser, or to circulating pump Pump Is a separate Donkey Suction fitted in Engine room & size 1 - 2"

ll 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 —

ll connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both

hey 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

hey 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

pipes are carried through the bunkers Four Suctions How are they protected Wood covering

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

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

s of examination of completion of fitting of Sea Connections — of Stern Tube — Screw shaft and Propeller Inspn Dublin

e Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from top grating

LERS, &c.—(Letter for record (S)) Manufacturers of Steel Stewarts & Lloyds Ltd.

Heating Surface of Boilers 2096 ☐' Is Forced Draft fitted Yes No. and Description of Boilers One Single Ended

king Pressure 185 lbs Tested by hydraulic pressure to 370 lbs Date of test 29/4/08 No. of Certificate 9462

each boiler be worked separately — Area of fire grate in each boiler 57·75 ☐' No. and Description of Safety Valves to

boiler 2 Cockburns Area of each valve 9·62 ☐" Pressure to which they are adjusted 190 lbs Are they fitted with easing gear Yes

lest distance between boilers or uptakes and bunkers or woodwork abt 8" Mean dia. of boilers 14'-6" Length 11'-0" Material of shell plates steel

ness 1 11/32" Range of tensile strength 28·3/32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.L.

seams D.B.S Diameter of rivet holes in long. seams 1 7/16" Pitch of rivets 9 1/16" ~~Lap of plates or~~ width of butt straps 21¼"

entages of strength of longitudinal joint rivets 92·8 plate 85·16 Working pressure of shell by rules 210 lbs Size of manhole in shell 16"×12"

of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Morison Material steel Outside diameter 3'-10 3/16"

th of plain part top — bottom — Thickness of plates crown 19/32" bottom — Description of longitudinal joint weld No. of strengthening rings —

ing pressure of furnace by the rules 200 Combustion chamber plates: Material steel Thickness: Sides 19/32" Back 19/32" Top 19/32" Bottom 29/32"

of stays to ditto: Sides 7 5/8" × 8¼" Back 8 3/8" × 7 3/4" Top 7 5/8" × 8½" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 187

rial of stays steel ~~Diameter~~ area at smallest part 1·48 ☐" Area supported by each stay 64 ☐" Working pressure by rules 185 End plates in steam space:

rial steel Thickness 17/16" Pitch of stays 25¼" × 20½" How are stays secured D. Nuts Working pressure by rules 190 Material of stays steel

eter at smallest part 10·178 ☐" Area supported by each stay 520 ☐" Working pressure by rules 200 Material of Front plates at bottom steel

ness 7/8" Material of Lower back plate steel Thickness 13/16" Greatest pitch of stays 13½" Working pressure of plate by rules 190

eter of tubes 3" Pitch of tubes 4¼" Material of tube plates steel Thickness: Front 7/8" Back 13/16" Mean pitch of stays 10 11/32"

across wide water spaces 13" Working pressures by rules 185 lbs Girders to Chamber tops: Material steel Depth and

ness of girder at centre 8½" × 7/8" × 2 Length as per rule 31½" Distance apart 8½" Number and pitch of stays in each 3 - 7 7/8"

ting pressure by rules 187 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked

tely Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

ffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

ing pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

THE SURVEY

Rpt. 4.

VERTICAL DONKEY BOILER— *Manufacturers of Steel* None

No. ____ *Description* ____

Made at ____ *By whom made* ____ *When made* ____ *Where fixed* ____

Working pressure ____ *tested by hydraulic pressure to* ____ *Date of test* ____ *No. of Certificate* ____ *Fire grate area* ____ *Description of Safety Valves* ____ *No. of Safety Valves* ____ *Area of each* ____ *Pressure to which they are adjusted* ____ *Date of adjustment* ____

If fitted with easing gear ____ *If steam from main boilers can enter the donkey boiler* ____ *Dia. of donkey boiler* ____ *Length* ____

Material of shell plates ____ *Thickness* ____ *Range of tensile strength* ____ *Descrip. of riveting long. seams* ____

Dia. of rivet holes ____ *Whether punched or drilled* ____ *Pitch of rivets* ____ *Lap of plating* ____ *Per centage of strength of joint* Rivets ____ Plates ____

Working pressure of shell by rules ____ *Thickness of shell crown plates* ____ *Radius of do.* ____ *No. of stays to do.* ____ *Dia. of stays* ____

Diameter of furnace Top ____ *Bottom* ____ *Length of furnace* ____ *Thickness of furnace plates* ____ *Description of joint* ____

Working pressure of furnace by rules ____ *Thickness of furnace crown plates* ____ *Stayed by* ____

Diameter of uptake ____ *Thickness of uptake plates* ____ *Thickness of water tubes* ____ *Dates of survey* ____

SPARE GEAR. *State the articles supplied :—* 2 top end bolts, 2 bottom end bolts, set of coupling bolts, 2 main bearing bolts, fwd & bilge valves, 10 boiler tubes, 20 condenser tubes, assorted iron etc.

The foregoing is a correct description,

Manufacturer. for David Rowan & Co Ltd

Dates of Survey while building

During progress of work in shops - - 1907. Dec. 2. 1908. March 23. 24. 26. April 1. 6. 14. 24. 29. May 1. 4. 8. 18. 22. 30. June 1. 2. 6. 12.

During erection on board vessel - - 16. 18.

Total No. of visits 21.

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " "

Dates of Examination of principal parts— *Cylinders* 23/3/08 *Slides* 23/3/08 *Covers* 23/3/08 *Pistons* 23/3/08 *Rods* 23/3/08

Connecting rods 23/3/08 *Crank shaft* 1/4/08 *Thrust shaft* 1/4/08 *Tunnel shafts* 1/5/08 *Screw shaft* 14/4/08 *Propeller* 26/3/08

Stern tube 14/4/08 *Steam pipes tested* 6/6/08 *Engine and boiler seatings* 2/6/08 *Engines holding down bolts* 2/6/08

Completion of pumping arrangements 12/6/08 *Boilers fixed* 12/6/08 *Engines tried under steam* 18/6/08

Main boiler safety valves adjusted 16/6/08 *Thickness of adjusting washers* P 12/32" S 13/32"

Material of Crank shaft steel *Identification Mark on Do.* 1/4/08 WB *Material of Thrust shaft* steel *Identification Mark on Do.* 1/4/08 WB

Material of Tunnel shafts steel *Identification Marks on Do.* 1/5/08 HGS *Material of Screw shafts* steel *Identification Marks on Do.* 4/5/08 HGS

Material of Steam Pipes Copper *Test pressure* 370 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c. The engines & boiler of this vessel have been constructed under Special Survey & are of good materials & workmanship. They have been securely fitted on board & satisfactorily tried under steam.

This vessel is in my opinion eligible & have notation — ✠ LMC 6.08 in The Register Book.

It is submitted that this vessel is eligible for THE RECORD. ✠ L.M.C. 6.08. ELEC. LIGHT. F.D.

A.R.S. J.H. 2-7-08.

3.7.08

H Gardner-Smith.

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

		When applied for.
The amount of Entry Fee ..	£ 2 : . :	27/6/1908
Special	£ 21 . :	When received.
Donkey Boiler Fee	£ : :	1/7/08
Travelling Expenses (if any)	£ : :	

2.7.08

Committee's Minute GLASGOW 30 JUN. 1908 FRI. 24 JUL 1908

MACHINERY CERTIFICATE WRITTEN.

Assigned + LMC 6.08. FDS } subject to classification of hull.

Certificate (if required) to be sent to Glasgow

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

Date of writing Rep

No. in Survey Reg. Book. 78 in Sup. on the

Master ____

Engines made a

Boilers made a

Registered Hor

Nom. Horse Po

ENGINES,

Dia. of Cylind

Is the screw s in the propel between the be liners are fitt

Dia. of Tunnel collars ____

No. of Feed

No. of Bilge

No. of Donk

In Engine R fwd

No. of Bilge P

Are all the bi

Are all conn

Are they fixe

Are they each

What pipes

Are all Pip

Are the Bilg

Dates of ex

Is the Scre

BOILERS

Total Heat

Working

Can each b each boiler

Smallest dis

Thickness long. seams

Per centage

Size of com

Length of

Working p

Pitch of st

Material

Material

Diameter

Thickness

Diameter

Pitch ac thickness

Working separately holes

If stiffene

Working