

REPORT ON MACHINERY.

No. 26878^a

Date of writing Report 5-11-13 10 When handed in at Local Office 5/11/13 Port of Hull Received at London Office FRI. NOV. 7-1913

No. in Survey held at Hull Date, First Survey Dec. 19/12 Last Survey 4-11-13, 19 Reg. Book.

on the steel screw steamer Guelder Rose (Number of Visits 65)

Master Built at By whom built Tons Gross 700 Net 302 When built

Engines made at Hull By whom made Earle & Co Ltd when made 1913-11

Boilers made at Hull By whom made Earle & Co Ltd when made 1913-11

Registered Horse Power Owners The Shipping Investments Ltd Port belonging to

Nom. Horse Power as per Section 28 104 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders Three No. of Cranks 3
 Dia. of Cylinders 15"-25"-40" Length of Stroke 27" Revs. per minute 103 Dia. of Screw shaft as per rule 8.99 Material of screw shaft as fitted 9/8" 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 liner made water tight in the propeller boss ✓ 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 3'-5 1/2"
 Dia. of Tunnel shaft as per rule 7.46" Dia. of Crank shaft journals as per rule 7.83" Dia. of Crank pin 7 7/8" Size of Crank webs 5 1/2" x 15" Dia. of thrust shaft under collars 7 7/8" Dia. of screw 10.9" Pitch of Screw 11'-0" No. of Blades 4 State whether moveable 30 Total surface 38 1/2"
 No. of Feed pumps two Diameter of ditto 2 1/4" Stroke 18" Can one be overhauled while the other is at work yes
 No. of Bilge pumps two Diameter of ditto 2 1/4" Stroke 18" Can one be overhauled while the other is at work yes
 No. of Donkey Engines two duplex Sizes of Pumps 6 3/8" x 6" Bilge & bellows 6 1/4" x 6" fed No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room one 2" & one 2" in stokehold In Holds, &c. two 2" in each compartment
 No. of Bilge Injections one size 3 1/2 Connected to condenser, or to circulating pump pumps a separate Donkey Suction fitted in Engine room & size yes 2 1/2"
 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 Forward suction How are they protected strong wood casing
 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
 Dates of examination of completion of fitting of Sea Connections 21-10-13 of Stern Tube 22-10-13 Screw shaft and Propeller 22-10-13
 Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Phoenix Abt, Holder Verin of Hoide
 Total Heating Surface of Boilers 1800 sq ft Is Forced Draft fitted no No. and Description of Boilers Two single ended
 Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs. Date of test 6-10-13 No. of Certificate 2022
 Can each boiler be worked separately yes Area of fire grate in each boiler 29.5 sq ft No. and Description of Safety Valves to each boiler Two spring loaded Area of each valve 3.14 sq ft Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork about 4 ft 1 1/2" Mean dia. of boilers 126" Length 10'-0" Material of shell plates S
 Thickness 15/16" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double long. seams R.P.D.B.I. Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 6 1/4" Lap of plates or width of butt straps 12 3/4"
 Per centages of strength of longitudinal joint rivets 84.4 plate 81. Working pressure of shell by rules 184 Size of manhole in shell 12" x 16"
 Size of compensating ring 8 5/16" x 15/16" No. and Description of Furnaces in each boiler Two plain Material S Outside diameter 37"
 Length of plain part top 8 1/16" bottom 7 1/4" Thickness of plates crown 3 3/4" bottom 3 1/4" Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 195 Combustion chamber plates: Material S Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 23/32"
 Pitch of stays to ditto: Sides 11" x 8 3/4" Back 10 1/2" x 9" Top 10 3/4" x 8 3/4" Stays are fitted with nuts or riveted heads nuts Working pressure by rules 180
 Material of stays S Area at smallest part 2.07 sq ft Area supported by each stay 96.5 sq ft Working pressure by rules 193 End plates in steam space: Material S Thickness 15/16" Pitch of stays 1 1/4" x 1 1/4" How are stays secured R. T. Working pressure by rules 197 Material of stays S
 Area at smallest part 4.22 sq ft Area supported by each stay 199.5 sq ft Working pressure by rules 220 Material of Front plates at bottom S
 Thickness 15/16" Material of Lower back plate S Thickness 15/16" Greatest pitch of stays 14" x 9" Working pressure of plate by rules 218
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 3/8" Material of tube plates S Thickness: Front 15/16" Back 13/16" Mean pitch of stays 9 1/8"
 Pitch across wide water spaces 1 1/4" Working pressures by rules 188 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8" x 1 1/2" Length as per rule 26 1/32" Distance apart 10 3/4" Number and pitch of stays in each Two 8 3/4"
 Working pressure by rules 200 Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked separately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint 2020 Diam. of rivet holes ✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓
 If stiffened with rings ✓ Distance between rings ✓ Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓
 Working pressure of end plates ✓ Area of safety valves to superheater ✓ Are they fitted with easing gear ✓

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THIS MARGIN.

VERTICAL DONKEY BOILER— Manufacturers of Steel

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
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted		Description of Safety
If fitted with casing gear	If steam from main boilers can enter the donkey boiler			Date of adjustment	
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams	Dia. of donkey boiler	Length
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	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— *Two top end bolts & nuts, two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed, bilge, air & circulating pump valves, one main & one donkey check valve, one propeller, 10 condenser & 6 boiler tubes, one safety valve spring & a quantity of bolts & nuts & iron of various sizes*
 The foregoing is a correct description,

Manufacturer. *J.H. Pye*

Dates of Survey while building: During progress of work in shops: 1912: Dec 19, 24, 31. 1913: Jan 10, 16, 23, Feb 8, 15, 19, 24, Mar 6, 11, 14, 18, 27, Apr 8, 11, 12, 15, 17, 21, 24, Apr 25, May 2, 5, 8, 16, 20, 27, June 3, 10, 14, 19, 25, 26, July 4, 9, 14, 17, Aug 18, 19, 28, 29, Sep 10, 17, 24, 27, Oct 1, 6, 13, 16, 17, 20, 21, 22, 24, 25, 27, 31, Nov 1, 4.
 Total No. of visits 65

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders 10-6-13 Slides 10-6-13 Covers 10-6-13 Pistons 19-6-13 Rods 19-6-13
 Connecting rods 19-6-13 Crank shaft 20-5-13 Thrust shaft 11-4-13 Tunnel shafts ✓ Screw shaft 11-4-13 Propeller 11-4-13
 Stern tube 10-6-13 Steam pipes tested 29-10-13 Engine and boiler seatings 13-10-13 Engines holding down bolts 29-10-13
 Completion of pumping arrangements 31-10-13 Boilers fixed 29-10-13 Engines tried under steam 31-10-13
 Main boiler safety valves adjusted 31-10-13 Thickness of adjusting washers *For P 7/16 S 7/16 & P 7/16 S 7/16*
 Material of Crank shaft *S* Identification Mark on Do. *3310 TM* Material of Thrust shaft *S* Identification Mark on Do. *1067 759*
 Material of Tunnel shafts ✓ Identification Marks on Do. Material of Screw shafts *S* Identification Marks on Do. *1067 759*
 Material of Steam Pipes *Solid drawn copper* Test pressure *450 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been constructed under special survey in accordance with the approved plans & the rules of this Society, the materials & workmanship are good. The Boiler & steam pipes were tested by hydraulic pressure & found good. The machinery has been properly fitted & secured on board & on completion tried under steam & found to work satisfactorily. The safety valves have been adjusted under steam & tried for accumulation. In my opinion the vessel is eligible for the work + L.M.C. 11.13.*

It is submitted that this vessel is eligible for THE RECORD. *L.M.C. 11.13*

Frank A. Sturgeon
 7-11-13
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee .. £ 2 : 0 :
 Special £ 15 : 12 :
 Donkey Boiler Fee £ ✓ : :
 Travelling Expenses (if any) £ ✓ : :
 When applied for, 6-11-13.
 When received, 8/11/13.

Committee's Minute TUE. NOV. 11. 1913
 Assigned + L.M.C. 11.13

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

MACHINERY CERTIFICATE WRITTEN

