

REPORT ON MACHINERY.

No. 15,916.

Date of writing Report 15 March 1921 When handed in at Local Office 15 March 1921 Port of Leith Received at London Office 17 MAR. 1921

No. in Survey held at Leith Date, First Survey 17 Feb 1921 Last Survey 12 March 1921
 Reg. Book. 9908.5 on the T. S. S. "Robert Dollar" (Number of Visits 12)

Master Clinton Built at Geestmünde By whom built J. C. Tecklenborg A. G. Tons 1100
 Engines made at Geestmünde By whom made J. C. Tecklenborg A. G. When built 1920
 Boilers made at do By whom made do when made 1920
 Registered Horse Power 1020 Owners Robert Dollar Co when made 1920
 Nom. Horse Power as per Section 28 1020 Is Refrigerating Machinery fitted for cargo purposes no Port belonging to London
 Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Twin Triple Expansion No. of Cylinders 6 No. of Cranks 6
 Dia. of Cylinders 28.454", 74" Length of Stroke 51 1/4" Revs. per minute 72 Dia. of Screw shaft 15.85" Material of steel
 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 yes 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 yes Length of stern bush 73 3/4"
 Dia. of Tunnel shaft 14.41" Dia. of Crank shaft journals 15.13" Dia. of Crank pin 15 1/2" Size of Crank web 9 3/8 x 25 5/8" Dia. of thrust shaft under
 collars 14 1/16" Dia. of screw 18.9" Pitch of Screw 18.9" No. of Blades 4 State whether moveable yes Total surface 92.35 sq ft
 No. of Feed pumps 2 Diameter of ditto 13 3/8 x 9 1/16" Stroke 26 1/16" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 4 5/16" Stroke 4 1/16" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 4 Sizes of Pumps 2 5/8 x 2 5/8 x 4 x 9 x 6 1/2 x 13 1/4" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 1 1/2 in : 5 - 4 1/4" 1 1/8 x 5 1/2 x 5 1/8" : 1 1/4 x 14 3/8 x 29 1/2" In Holds, &c. 1 1/2 to 6 - 2 - 4 1/4" in each
tunnel 8 - 4 1/4" No. of Bilge Injections 2 sizes 7 1/2" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes - 4 1/4"
 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 yes
 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 yes
 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 yes Is it fitted with a watertight door yes worked from E. R. top platform

BOILERS, &c.—(Letter for record yes) Manufacturers of Steel yes

Total Heating Surface of Boilers 13993.2 sq ft Is Forced Draft fitted yes No. and Description of Boilers 5 single Ended
 Working Pressure 200 lbs Tested by hydraulic pressure to yes Date of test yes No. of Certificate yes
 Can each boiler be worked separately yes Area of fire grate in each boiler 59.2 sq ft No. and Description of Safety Valves to
 each boiler double spring loaded Area of each valve 12.17 sq in Pressure to which they are adjusted 205 lbs Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 22" Mean dia. of boilers 15.09" Length 12.13" Material of shell plates steel
 Thickness 1 1/4" Range of tensile strength yes Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D. Riv.
 Long. seams A.R.D.B.S Diameter of rivet holes in long. seams 1 1/2" Pitch of rivets 19 5/8" Length of plates yes width of butt straps 29 7/8"
 Percentages of strength of longitudinal joint 122 Working pressure of shell by rules 202 Size of manhole in shell 11 3/4" x 15 3/4"
 Size of compensating ring 39 1/2 in x 1 1/4" No. and Description of Furnaces in each boiler 3 corrugated Material steel Outside diameter 49 1/4"
 Length of plain part top 19" Thickness of plates bottom 1 1/8" Description of longitudinal joint weld No. of strengthening rings yes
 Working pressure of furnace by the rules 204 Combustion chamber plates: Material steel Thickness: Sides 11/16" Back 21/32" Top 1/16" Bottom 29/32"
 Pitch of stays to ditto: Sides 8 3/8 x 6 3/4" Back 7 3/8 x 6 3/4" Top 7 3/8 x 7 1/4" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 268
 Material of stays steel Area at smallest part 1.73 Area supported by each stay 61 sq in Working pressure by rules 255 End plates in steam space:
 Material steel Thickness 1 1/16" Pitch of stays 15 3/8 x 14" How are stays secured D. Nuts Working pressure by rules 234 Material of stays steel
 Area at smallest part 6.78 sq in Area supported by each stay 215.25 sq in Working pressure by rules 328 Material of Front plates at bottom steel
 Thickness 1 1/16" Material of Lower back plate steel Thickness 1" Greatest pitch of stays 13 3/8 x 6 3/4" Working pressure of plate by rules 317
 Diameter of tubes 3 Pitch of tubes 4 3/8 x 4 3/8" Material of tube plates steel Thickness: Front 1 1/16" Back 29/32" Mean pitch of stays 8 1/4"
 Pitch across wide water spaces 14" Working pressures by rules 206 Girders to Chamber tops: Material steel Depth and
 Thickness of girder at centre 10 1/4 x 20 1/16" Length as per rule 34 5/8" Distance apart 7 3/4" Number and pitch of stays in each 3 @ 7 3/8"
 Working pressure by rules 214 Steam dome: description of joint to shell yes % of strength of joint yes
 Diameter yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet holes yes
 Pitch of rivets yes Working pressure of shell by rules yes Crown plates yes Thickness yes How stayed yes

SUPERHEATER. Type yes Date of Approval of Plan yes Tested by Hydraulic Pressure to yes
 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler yes
 Diameter of Safety Valve yes Pressure to which each is adjusted yes Is Easing Gear fitted yes

IS A DONKEY BOILER FITTED?

none

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— 2 connecting rod top end bolts & nuts: 2 connecting rod bottom end bolts & nuts: 2 main bearing bolts: 1 set of coupling bolts: 1 set of feed & bilge pump valves: a quantity of assorted bolts & nuts of various sizes: 2 top end bearings: 1 bottom end bearing: 1 valve spindle: 2 air pump links: 1 air pump rod: 2 propeller blades.

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

" " " 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

9. 3. 21

Thickness of adjusting washers

P.A.B. 3/4" C.A.B. 3/4" S.A.B. 3/4" F.P.B. 3/4"

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

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

no

If so, state name of vessel

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

The machinery of this vessel has been opened up, examined, & found to be of good & sound construction.

Under steam trial the machinery worked satisfactory.

It is submitted that the machinery of this vessel is eligible for a record of L.M.C. 3. 21 in the Register Book.

The amount of Entry Fee ... £

Special ... £

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for,

When received,

FRI. 8 APR. 1921

Committee's Minute

Assigned

Deferred no action

TUE 17 APR. 1923

Engineer Surveyor to Lloyd's Register of Shipping

TUE JUN. 14 1921

L.M.C. 3. 21

Lloyd's Register Foundation