

REPORT ON MACHINERY.

No. 1477

REC'D NEW YORK Feb. 16 1918

REC'D NEW YORK No. 21-1918

Received at London Office

No. in Survey held at Lachine, P.Q.

Port of Montreal

Date, First Survey July 25, 1917 Last Survey Feb. 16, 1918

on the Nas Shena

Master

Built at Victoria B.C.

By whom built Cameron Genco Mills Ltd.

Tons { Gross 2342.41
Net 1416.43

Engines made at Lachine, P.Q.

By whom made Dominion Bridge Co.

When built 1918

Boilers made at Montreal

By whom made Canadian Vickers Ltd.

when made 2-18

Registered Horse Power 1400 IHP

Owners Imperial Munitions Board

when made 1918

Net Horse Power as per Section 28 328

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 20-33-54

Length of Stroke 40

Revs. per minute

Dia. of Screw shaft as per rule 1 1/2"

Material of screw shaft S

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

Is 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 48"

Dia. of Tunnel shaft as per rule 10.398"

Dia. of Crank shaft journals as per rule 10.9"

Dia. of Crank pin 1 1/2"

Size of Crank webs 3'5" x 7"

Dia. of screw 1 1/2"

Pitch of Screw 15-3"

No. of Blades 4

State whether moveable fixed

Total surface 66.4'

No. of Feed pumps 2

Diameter of ditto 3 1/2"

Stroke 20

Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2

Diameter of ditto 3 1/2"

Stroke 20

Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3

Sizes of Pumps

Ballast 7 1/2" x 9" x 10" duplex

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3-3" pipe

Feed 10 x 9 x 12 simplex

In Holds, &c.

10-3" pipe

No. of Bilge Injections 1

sizes 7"

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size 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 Yes

Are all connections with the sea direct on the skin of the ship Yes

Are they Valves or Cocks

Valves

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

That pipes are carried through the bunkers 8 Bilge Suction lines

How are they protected

Wooden Boxes/iron Sheathed

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 Feb 1918

of Stern Tube Mar 1918

Screw shaft and Propeller Apr 1918

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door Yes

worked from Engine Room top platform

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

Working Pressure 185 lbs.

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to

each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

ing. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Percentages of strength of longitudinal joint

rivets.....

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top.....

Thickness of plates

bottom.....

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

Thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

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

Diam. of rivet

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

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

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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	Description of
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	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:— 2 connecting rod & end bolts. 2 bottom end bolts. 2 main beam
1 set coupling bolts 1 set feed & bilge pump valves. 1 set air pump valves 1 set of piston springs. 1 set
of circulating pump valves 25 condenser bolts 50 screwed glands. Quantity of assorted bolts & nuts & washers
various sizes

The foregoing is a correct description,

Manufacturer.

Donimion Bridge Co. Ltd.
S. W. Vaughan V.P. & G.D.

Dates of Survey while building	During progress of work in shops - - -	1917, July. 25. Sept. 22. Oct. 17. 30. Nov. 12. 23. 30. Dec. 4. 12. 14. 22. 28.	1918, Jan. 2. 7. 10. 15. 17. 21. 24. 29. Feb. 1. 4. 10. 16.
	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 15-1-18	Slides 17-1-18	Covers 15-1-18	Pistons 15-1-18	Rods 24-1-18
Connecting rods	24-1-18	Crank shaft	29-1-18	Thrust shaft	10-2-18
Tunnel shafts	29-1-18	Screw shaft	1-2-18	Propeller	
Stern tube	1-2-18	Steam pipes tested	Engine and boiler seatings	Engines holding down bolts	
Completion of pumping arrangements	Boilers fixed	Engines tried under steam			
Main boiler safety valves adjusted	Thickness of adjusting washers				
Material of Crank shaft S	CAST-STEEL WEBS, N° 35. FORGINGS. Identification Mark on Do. 4-10-17	Material of Thrust shaft S	Identification Mark on Do. 4-10-17		
Material of Tunnel shafts S	Identification Marks on Do. 4-10-17	Material of Screw shaft S	Identification Marks on Do. 4-10-17		
Material of Steam Pipes	Test pressure				

General Remarks (State quality of workmanship, opinions as to class, &c. These engines have been constructed under special survey in accordance with the rules. Materials are good and workmanship satisfactory.

They are being shipped to the I. M. B. assembly yard Ogden Point, Victoria B. where it is intended to fit them together with the boilers on board one of the wooden hulls. When this is done the ~~machinery~~ ^{machinery} will be eligible in my opinion to have the record of F.L.M.C. with date.
Propellers to be shipped direct from manufacturers. Not seen here

The amount of Entry Fee	£	When applied for,
Special	£ 61.00	Feb. 20 1918
Donkey Boiler Fee	£	When received,
Travelling Expenses (if any)	£ 15.85	2/6/19

Committee's Minute

TUE. 10 DEC. 1918

Assigned

TUE. JAN. 20. 1920

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

TUE. 27 MAY. 1919

TUE. 13 JAN. 1920

FRI. 9 JAN. 1920

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