

Rpt. 4.

## REPORT ON MACHINERY.

No. 1600

WED. 20.10.18

Received at London Office

Date of writing Report *Oct. 4 1918* When handed in at Local Office *Oct. 18 1918* Port of *Montreal*  
 No. in Survey held at *Lewis. Que.* Date, First Survey *Jan. 17 1917* Last Survey *July 30 1918*  
 Reg. Book. on the *S. Carberry "CANORA"* (Number of Visits *28*)  
 Master *N. McKay* Built at *Lewis. Que.* By whom built *David Shipley & Rep. Co. Ltd.* Tons { Gross *2382*  
 Engines made at *Toronto. Ont.* By whom made *John Inglis Co.* Net *940*  
 Boilers made at " " By whom made " " When built *8-18*  
 Registered Horse Power *166.6* Owners *Canadian Northern R.R. Co.* Port belonging to *Quebec*  
 Nom. Horse Power as per Section 28 *374* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*

Engines, &c.—Description of Engines *Triple Expansion* No. of Cylinders *4* No. of Cranks *4*  
 Dia. of Cylinders *24"-38"-43"-43"* Length of Stroke *30"* Revs. per minute *140* Dia. of Screw shaft *11.74"* Material of screw shaft *Steel*  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube *No liners* 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 *48"*  
 Dia. of Tunnel shaft *10.35"* as per rule *10.45* Dia. of Crank shaft journals *10.86"* as per rule *10.98* Dia. of Crank pin *11"* Size of Crank webs *12 x 7 1/2"* Dia. of thrust shaft under  
 collars *11"* Dia. of screw *12.0"* Pitch of Screw *12.0"* No. of Blades *4* State whether moveable *Yes* Total surface *44 sq ft*  
 No. of Feed pumps *2 Simplex* Diameter of ditto *7"* Stroke *12"* Can one be overhauled while the other is at work *Yes Independent*  
 No. of Bilge pumps *1 GEN. SERVICE 12 x 7 1/2"* Diameter of ditto *1-4 1/2"* Stroke *1-14 x 24 x 18"* Can one be overhauled while the other is at work *Independent*  
 No. of Donkey Engines *8* Sizes of Pumps *1-4 1/2 x 18 x 18"* No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room *2-3 1/2"* In Hold, &c. *For shaft runs 1-2 1/2"* No. 1. Hold *1-3 1/2"* No. 2. Hold *1-3 1/2"*  
 All Rears *1-2 1/2"* Ballast. FPH *1-2 1/2"* For deep tank *1-8"* All deep tank *1-8"* All Peak tank *1-2 1/2"*  
 No. of Bilge Injections *1* sizes *8"* Connected to condenser, or to circulating pump *Yes* Is a separate Donkey Suction fitted in Engine room & size *Yes 8"*  
 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 and cocks*  
 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 *Summit through* Is it fitted with a watertight door *Yes* worked from *Eng. Room*

BOILERS, &c.—(Letter for record *S.*) Manufacturers of Steel *North Bros. Coatsville, Pa. U.S.A.* 4SB.  
 Total Heating Surface of Boilers *6344 sq ft* Is Forced Draft fitted *Yes* No. and Description of Boilers *4 Scotch*  
 Working Pressure *145 lbs* Tested by hydraulic pressure to *263 lbs* Date of test *23rd 11.1916* No. of Certificate *13*  
 Can each boiler be worked separately *Yes* Area of fire grate in each boiler *36.5 sq ft* No. and Description of Safety Valves to  
 each boiler *2 Spring loaded* Area of each valve *7.06 sq in* Pressure to which they are adjusted *145 lbs* Are they fitted with easing gear *Yes*  
 Smallest distance between boilers or uptakes and bunkers or woodwork *14 inches* Mean dia. of boilers *11'6"* Length *11'6"* Material of shell plates *Steel*  
 Thickness *3/32"* Range of tensile strength *28 TONS* Are the shell plates welded or flanged *No* Descrip. of riveting: cir. seams *Double*  
 long. seams *Double* Diameter of rivet holes in long. seams *1 1/2"* Pitch of rivets *7 1/2"* Lap of plates or width of butt straps *16 1/2"*  
 Per centages of strength of longitudinal joint *93%* Working pressure of shell by rules *182.9 lbs* Size of manhole in shell *11" x 15"*  
 Size of compensating ring *30 x 34 x 1"* No. and Description of Furnaces in each boiler *2 Morrison* Material *Steel* Outside diameter *39 3/4"*  
 Length of plain part *4"* Thickness of plates *1 1/2"* Description of longitudinal joint *Welded* No. of strengthening rings *1*  
 Working pressure of furnace by the rules *175 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *2"* Back *9/16"* Top *9/16"* Bottom *1"*  
 Pitch of stays to ditto: Sides *6 x 6"* Back *6 x 6"* Top *7 x 7 1/2"* If stays are fitted with nuts or riveted heads *on bounding over* Working pressure by rules *220 lbs*  
 Material of stays *Steel* Area at smallest part *4 1/2"* Area supported by each stay *36 sq in* Working pressure by rules *191 lbs* End plates in steam space:  
 Material *Steel* Thickness *7/8"* Pitch of stays *15 x 14"* How are stays secured *Nuts* Working pressure by rules *191 lbs* Material of stays *Steel*  
 Area at smallest part *2 1/4"* Area supported by each stay *210 sq in* Working pressure by rules *196 lbs* Material of Front plates at bottom *Steel*  
 Thickness *1 1/2"* Material of Lower back plate *Steel* Thickness *1 1/2"* Greatest pitch of stays *15"* Working pressure of plate by rules *220 lbs*  
 Diameter of tubes *3"* Pitch of tubes *4 1/2" x 4 1/4"* Material of tube plates *Steel* Thickness: Front *1 1/2"* Back *3/4"* Mean pitch of stays *8 1/8" x 8 1/4"*  
 Pitch across wide water spaces *14"* Working pressures by rules *183 lbs* Girders to Chamber tops: Material *Steel* Depth and  
 thickness of girder at centre *8 1/2" x 8 1/2"* Length as per rule *2'-5"* Distance apart *7 1/2"* Number and pitch of stays in each *3-7"*  
 Working pressure by rules *237 lbs* 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*  
 Date of Test *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?

No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

1 set of connecting rod bolts top end ✓ 1 set of tilge pump valves ✓  
1 set " " " bottom end ✓ (No piston springs as all are solid pistons) ✓  
1 set of coupling bolts. ✓  
2 Main bearing bolts ✓  
1 set of feed pump valves. ✓  
1 set of Air pump valves ✓

The foregoing is a correct description,

The Blue Ensign Co Ltd

Manufacturer.

Dates of Survey while building { During progress of work in shops -- } See Toronto Report attached.  
{ During erection on board vessel -- } 1917. Jan. 14. Feb. 2. Mar. 2. April 10. 25 May 3. 29 Sept. 26 Oct. 27 Nov. 12 Dec. 8. 1918. Jan. 8. 25  
Total No. of visits 28.  
Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 10/16 13/16 Slides 29/3/16 Covers 29/3/16 Pistons 29/3/16 Rods 29/3/16  
Connecting rods 29/3/16 Crank shaft 29/3/16 Thrust shaft 29/3/16 Tunnel shafts 29/3/16 Screw shaft 29/3/16 Propellers  
Stern tube 5. 4-16-17 Steam pipes tested 27/6/18 Engine and boiler seatings 16-4-18 Engines holding down bolts 17/5/18  
Completion of pumping arrangements 13/6/18 Boilers fixed 17/5/18 Engines tried under steam 27/7/18  
Completion of fitting sea connections 13/6/18 Stern tube 17/5/18 Screw shaft and propeller 17/5/18  
Main boiler safety valves adjusted 28/6/18 Thickness of adjusting washers Lock nut.  
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 Steel ✓ Test pressure 525 lbs ✓  
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. These engines have been fitted on board the vessel and tried under steam and all auxiliaries. All the machinery was found to be working well.

The main steam pipes were tested on board to 525 lbs water pressure and found right. The safety valves were adjusted under steam to a pressure of 178 lbs per sq in.

The surveyors report on the engines during construction in Toronto is attached to this report. No forging certificates were forwarded and no marks had been transferred to the finished shafting. The manufacturers state that all the forgings were tested by the manufacturers.

It is submitted that this vessel is eligible for THE RECORD. + LMC 7. 18. F.D.

Date of Report built Thoulda be 7. 18

ARR

JWZ 27/11/18.

The amount of Entry Fee ... £ : : When applied for.  
Special ... £ : : 19.  
Donkey Boiler Fee ... £ : : When received,  
Travelling Expenses (if any) £ : : 19.

Committee's Minute

Assigned

TUE. 18. MAR. 1919

+ L.M.C. 7. 18. F.D.

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



© 2020

Lloyd's Register Foundation