Rpt. 4.

REC'D NEW YORK Oct. 17 1918.

Mtl 1600.

REPORT ON MACHINERY.

No. 2or.

Port of

Received at London Office

No. in Reg. Book. Survey held at Canora Date, first Survey Last Survey Mtl. 30 July 1918 (Number of Visits)

on the Canora Tons Gross Net

Master Built at Lauzon By whom built Davie S.B. & Repair Co When built 1918

Engines made at Toronto - Canada By whom made John Inglis Co when made 1916

Boilers made at " " By whom made " when made "

Registered Horse Power Owners Canadian Northern R'way Port belonging to Quebec

Nom. Horse Power as per Section 28 374 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders (4) No. of Cranks (4)

Dia. of Cylinders 24"-38" & (2) 43" Length of Stroke 30" Revs. per minute estimated 140 Dia. of Screw shaft as per rule as fitted 12 Material of screw shaft Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No 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 —— 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 48"

Dia. of Tunnel shaft as per rule 1035 as fitted 10½" Dia. of Crank shaft journals as per rule 1086 as fitted 11" Dia. of Crank pin 11" Size of Crank webs W 12" × T 7¾" 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 □'

No. of Feed pumps (2) Simplex Diameter of ditto S 12" - W 7" Stroke 12" Can one be overhauled while the other is at work Independent

No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room In Holds, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers How are they protected

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

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

Dates of examination of completion of fitting of Sea Connections of Stern Tube Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel Worth Bros. Coatsville Pa. U.S.A.

Total Heating Surface of Boilers 6344 □' Is Forced Draft fitted Yes. Howden No. and Description of Boilers (4) Scotch

Working Pressure 175 Tested by hydraulic pressure to 263 Date of test (2) April 3rd 1916 (2) April 21st 1916 No. of Certificate

Can each boiler be worked separately Yes Area of fire grate in each boiler 36.5 □' No. and Description of Safety Valves to each boiler (2) 3" Spring Area of each valve 7.06 □" Pressure to which they are adjusted 175 lbs Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 11'-6" Length 11'-6" Material of shell plates Steel

Thickness 41/32" Range of tensile strength 28 tons Are the shell plates welded or flanged —— Descrip. of riveting: cir. seams Double long. seams Triple Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7¼" ~~Lap of plates or~~ width of butt straps 16½"

Per centages of strength of longitudinal joint rivets plate Working pressure of shell by rules Size of manhole in shell cut out 13⅞" × 18"

Size of compensating ring 30" × 34" × 1" No. and Description of Furnaces in each boiler (2) Morison Material Steel Outside diameter small corrugations 39¾

Length of plain part top 4" bottom 4" Thickness of plates crown bottom Description of longitudinal joint Welded No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 1"

Pitch of stays to ditto: Sides 6" × 6" Back 6" × 6" Top 7" × 7½" If stays are fitted with nuts or riveted heads Boundary Row Nuts Working pressure by rules

Material of stays Steel Diameter at smallest part 1⅛" & 1⅜" Area supported by each stay 36 □" Working pressure by rules End plates in steam space: Material Steel Thickness 7/8" Pitch of stays 15" × 14" How are stays secured Nuts Working pressure by rules Material of stays Steel

Diameter at smallest part 2¼" Area supported by each stay 210 □" Working pressure by rules Material of Front plates at bottom Steel

Thickness 15/16" Material of Lower back plate Steel Thickness 15/16" Greatest pitch of stays 15" Working pressure of plate by rules

Diameter of tubes 3" Pitch of tubes 4⅛" × 4¾" Material of tube plates Steel Thickness: Front 15/16" Back 3/4" Mean pitch of stays 8⅜" × 8¼"

Pitch across wide water spaces 14" Working pressures by rules Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 5/8" double Length as per rule Distance apart 7½" Number and pitch of stays in each (3) 7"

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 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

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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 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 :—*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building — *During progress of work in shops* 24/1/16, 1/2/16, 14/2/16, 16/2/16, 25/2/16, 10/3/16, 29/3/16, 3/4/16, 21/4/16

During erection on board vessel

Total No. of visits (9)

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " 〃

Dates of Examination of principal parts—*Cylinders* 10/3/16, 29/3/16 *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 *Propeller* ——

Stern tube *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 *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*

General Remarks (*State quality of workmanship, opinions as to class, &c.* Good workmanship, for material &c) in shafts - connecting rods & piston rods, see certificate attached

No forging reports were written by the Acting Surveyor - Mr J Dodds who states the forgings were examined by him but were not stamped with any identification marks

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

The amount of Entry Fee..	£ $15.00	When applied for,	Oct 3rd 1916
Special	£ $193.50		
Donkey Boiler Fee	£ :	When received,	Oct 3rd 1916
Travelling Expenses (if any) Cable	£ $: 2.50		

~~£ 3/-~~ TUE. 18 MAR. 1919

Act'g Engineer Surveyor to Lloyd's Register of British & Foreign Shipping. John Dodds

Committee's Minute

Assigned See Mtl Rpt No 1600

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