

REPORT ON MACHINERY.

No. 165.

Received at London Office
Date of writing Report Aug. 27 1920 When handed in at Local Office Aug. 28 1920 Port of Toronto MON. 23 MAY. 1921No. in Survey held at Toronto Date, First Survey Oct. 24 1919 Last Survey Aug. 23 1920
Reg. Book. on the Harbor Marine Eng. No 2 (Number of Visits 49)Master Built at By whom built Tons } Gross
Engines made at Toronto By whom made The John Inglis Co Ltd when made 1920
Boilers made at Toronto By whom made The John Inglis Co Ltd when made 1920Registered Horse Power Owners Canadian Merchant Marine Port belonging to
Nom. Horse Power as per Section 28 521 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted YesENGINES, &c.—Description of Engines Inverted Triple Expansion No. of Cylinders 3 No. of Cranks 3Dia. of Cylinders 27 44 73 Length of Stroke 48 Revs. per minute Dia. of Screw shaft as per rule 14.63 Material of O.A.S.
as fitted 15.5 screw shaft)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

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

Dia. of Tunnel shaft as per rule 13.3 Dia. of Crank shaft journals as per rule 13.97 Dia. of Crank pin 14.5 Size of Crank webs 9 x 28 Dia. of thrust shaft undercollars 14.5 Dia. of screw 17.6 Pitch of Screw 15.9 No. of Blades State whether moveable Total surfaceNo. of Feed pumps 2 Diameter of ditto 4 Stroke 24 Can one be overhauled while the other is at work YesNo. of Bilge pumps 2 Diameter of ditto 4 Stroke 24 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

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

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

Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers

Working Pressure 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

long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets..... Working pressure of shell by rules Size of manhole in shell

plate..... Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top..... Thickness of plates crown..... Description of longitudinal joint No. of strengthening rings

bottom..... 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 Area 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

Area 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 Steam dome: description of joint to shell % of strength of joint

Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

5410-682 M 389-0145

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two main bearing bolts and nuts
Two Connecting rod top end bolts and nuts
Two " " bottom " " "
One Set Coupling bolts and nuts
One Set L.P. piston rings 1 Piston valve.

The foregoing is a correct description,

The Columbian Co. Limited Manufacturer.

1919
Dates of Survey while building { During progress of work in shops - - - Dec 24 Nov 21 27 Dec 6 22 27 Jan 2 6 12 19 22 Feb 3 4 6 9 11 14 17 18 23 Feb 24
{ During erection on board vessel - - - Apr 26 29 May 11 19 20 28 June 2 7 24 29 July 6 12 19 20 29 31 Aug 5 7 9 12 16
Total No. of visits 49

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 20. 7. 20 Slides 23. 8. 20 Covers 20. 7. 20 Pistons 23. 8. 20 Rods 20. 7. 20

Connecting rods 7. 8. 20 Crank shaft 23. 8. 20 Thrust shaft 23. 8. 20 Tunnel shafts 20. 7. 20 Screw shaft 20. 7. 20 Propeller 20. 7. 20

Stern tube 19. 7. 20 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 Thickness of adjusting washers

Material of Crank shaft O.H.S. Identification Mark on Do. 1596. Material of Thrust shaft O.H.S. Identification Mark on Do. 1596.

Material of Tunnel shafts O.H.S. Identification Marks on Do. 1600-1. 2. 3. 4. 5 Material of Screw shafts O.H.S. Identification Marks on Do. 1600-1. 2. 3. 4. 5

Material of Steam Pipes Test pressure

Is an installation fitted for burning oil fuel 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 Yes If so, state name of vessel Harbor Marine No. 1

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

This machinery has been constructed under special survey. It is of good material and workmanship, and will be eligible for record L.M.C. when properly fitted and tested in vessel.

The amount of Entry Fee ... £ : : When applied for,
Special ... £ 76 : 75 : Aug 27 1920
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ 3 : 10 : Sep 2 1920

Committee's Minute

TUE MAY. 31 1921

Assigned See minute on Vcr 866

Engineer Surveyor to Lloyd's Register of Ship

TUE NOV. 11 1921

Lloyd's Register Foundation