

REPORT ON MACHINERY.

No. 27456

THU. 20 MAR. 1919

Date of writing Report

19

When handed in at Local Office

10 MAR 1919

Port of

Received at London Office

Sunderland

No. in Survey held at
Reg. Book.

Sunderland

Date, First Survey

22nd 10th 18

Last Survey

8th March 1919

(Number of Visits)

35

Master Griffiths Built at Sunderland By whom built J. Thompson & Sons Ltd (No 521) When built 1919Engines made at Sunderland By whom made J. Dickinson & Sons Ltd (No 834) when made 1919Boilers made at Sunderland By whom made J. Dickinson & Sons Ltd (No 834) when made 1919Registered Horse Power - Owners Canadian Pacific Railway Co Port belonging to LondonNom. Horse Power as per Section 28 620 619 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yesENGINES, &c.—Description of Engines Triple expansion

No. of Cylinders

No. of Cranks

Dia. of Cylinders 27"-48"-75" Length of Stroke 54" Revs. per minute 79 Dia. of Screw shaft as per rule 15.26 15 2/3 Material of steelIs 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 tightin 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive - If twoliners are fitted, is the shaft lapped or protected between the liners - Length of stern bush 5'-6"Dia. of Tunnel shaft as per rule 13.92 14 1/2 Dia. of Crank shaft journals as per rule 14.64 14 7/8 Dia. of Crank pin 14 7/8 Size of Crank webs 30 1/2 x 9 1/2 Dia. of thrust shaft undercollars 14 7/8 Dia. of screw 18'-0" Pitch of Screw 16'-6" No. of Blades 4 State whether moveable no Total surface 96 sq ftNo. of Feed pumps 2 Diameter of ditto 9 Stroke 21" Can one be overhauled while the other is at work yes. Weirs. steamers 12"No. of Bilge pumps 2 Diameter of ditto 4 1/2 Stroke 30" Can one be overhauled while the other is at work yesNo. of Donkey Engines 2 Sizes of Pumps 9 1/2 x 7 x 18. 10 1/2 x 14 x 21 No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 4 @ 3 1/2" In Holds, &c. No 1 hold - 2 @ 3 1/2". No 2 hold - 2 @ 3 1/2".No 3 hold - 2 @ 3 1/2". No 4 hold - 2 @ 3 1/2". No 5 hold - 2 @ 3 1/2". Tunnel well - 1 @ 2 1/2".No. of Bilge Injections 2 sizes 11" Connected to condenser, or to circulating pump 6 P. Is a separate Donkey Suction fitted in Engine room & size yes. 3 1/2"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 noneAre all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks bothAre 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 belowAre 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 yesWhat pipes are carried through the bunkers forward hold suction How are they protected under timber boardsAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesIs the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Top platformBOILERS, &c.—(Letter for record S) Manufacturers of Steel John Spencer & Sons Ltd.Total Heating Surface of Boilers 95250 sq ft Is Forced Draft fitted yes No. and Description of Boilers Three single ended mainWorking Pressure 180 Tested by hydraulic pressure to 360 Date of test 23-1-19 No. of Certificate 3527.3532Can each boiler be worked separately yes Area of fire grate in each boiler 73 sq ft No. and Description of Safety Valves toeach boiler Two, direct spring Area of each valve 12.6 sq" Pressure to which they are adjusted 185 Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 2'-3" Mean dia. of boilers 16'-2 1/2" Length 12'-3" Material of shell plates steelThickness 1 1/2" Range of tensile strength 28 3/4 - 33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R.long. seams ABS. TR Diameter of rivet holes in long. seams 1 3/8 Pitch of rivets 9 1/2 Lap of plates or width of butt straps 20 1/8Per centages of strength of longitudinal joint 88.6 Working pressure of shell by rules 191 Size of manhole in shell 16 x 12Size of compensating ring flanged No. and Description of Furnaces in each boiler 4, Deighton Material steel Outside diameter 3'-4"Length of plain part top 11" Thickness of plates bottom 1 1/2" Description of longitudinal joint welded No. of strengthening rings -Working pressure of furnace by the rules 190 Combustion chamber plates: Material steel Thickness: Sides 2 3/2" Back 3" Top 2 3/2" Bottom 1 1/8"Pitch of stays to ditto: Sides 10 1/8 x 8 3/4 Back 9 1/2 x 9 3/8 Top 10 1/8 x 8 3/4 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 198Material of stays steel Area at smallest part 2.03 sq" Area supported by each stay 88.75 sq" Working pressure by rules 205 End plates in steam space:Material steel Thickness 1 1/2" Pitch of stays 23 1/2 x 22 1/2 How are stays secured DN & W Working pressure by rules 185 Material of stays steelArea at smallest part 9.6 sq" Area supported by each stay 528 sq" Working pressure by rules 189 Material of Front plates at bottom steelThickness 3 1/2" Material of Lower back plate steel Thickness 1 1/8" Greatest pitch of stays 13 5/8 x 9 13/16 Working pressure of plate by rules 187Diameter of tubes 2 1/2" Pitch of tubes 3 3/4 x 3 5/8 Material of tube plates steel Thickness: Front 3 1/2" Back 3" Mean pitch of stays 11 1/4 x 7 1/4Pitch across wide water spaces 13 5/8 Working pressures by rules 180 Girders to Chamber tops: Material steel Depth andthickness of girder at centre 2 @ 10 1/2 x 1 1/8 Length as per rule 36 1/2 Distance apart 10 1/8 Number and pitch of stays in each 3 @ 8 3/4Working pressure by rules 200 Steam dome: description of joint to shell none % 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 _____

W1162-0098 Foundation

IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *-*

SPARE GEAR. State the articles supplied:—Two connecting rod top and bottom end bolts, two main bearing bolts, one set of coupling bolts, one set of feed and bilge pump valves, iron and bolts of various sizes, one propeller.

The foregoing is a correct description,

John Dickinson & Sons, Limited.

J. Dickinson

Manufacturer.

Dates of Survey while building
During progress of work in shops --
During erection on board vessel --
Total No. of visits

1918 Oct. 22, 24, 25, 30 Nov. 1, 14, 20, 25 Dec. 9, 12, 13, 15, 21 Jan. 8, 13, 14, 15, 21, 23, 24 Feb. 4, 6, 8, 12, 17
20, 21, 26, 27, 28 Mar. 3, 4, 5, 7, 8
(35)

Is the approved plan of main boiler forwarded herewith *yes*
" " " donkey " " "

Dates of Examination of principal parts—Cylinders 18-12-18 Slides 8-1-19 Covers 12-12-18 Pistons 13-1-19 Rods 15-1-19
Connecting rods 21-12-18 Crank shaft 30-1-19 Thrust shaft 30-1-19 Tunnel shafts 30-1-19 Screw shaft 30-1-19 Propeller 4-2-19
Stern tube 8-1-19 Steam pipes tested 21-2-19 Engine and boiler seatings 13-12-18 Engines holding down bolts 21-2-19
Completion of pumping arrangements 3-3-19 Boilers fixed 26-2-19 Engines tried under steam 28-2-19
Completion of fitting sea connections 13-12-18 Stern tube 13-1-19 Screw shaft and propeller 6-2-19
Main boiler safety valves adjusted 28-2-19 Thickness of adjusting washer *Port 1 1/2", S 1 1/2"; Centre 1 1/2", S 1 1/2"; Starboard 1 1/2", S 1 1/2"*

Material of Crank shaft *1. Steel* Identification Mark on Do. *2308 JP* Material of Thrust shaft *1. Steel* Identification Mark on Do. *2365 JP*
Material of Tunnel shafts *1. Steel* Identification Marks on Do. *2310 2331 2352 A* Material of Screw shafts *1. Steel* Identification Marks on Do. *3582 N. W.*

Material of Steam Pipes *Lapwelded wrought iron* Test pressure *540 pounds per square inch*

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 *yes* If so, state name of vessel *Standard "F" type.*

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

The workmanship and materials are good.
The machinery has been constructed under special survey and is eligible in my opinion for classification and the record *+ L.M.C. 3, 19.*

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 3, 19 F.D.

20/3/19

J. P. R.

The amount of Entry Fee ... £ : : When applied for,
Special ... £ 148: - *173 1919*
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : *193 1919*

She Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 25 MAR. 1919

TUE. 9 MAR. 1920

Assigned

+ L.M.C. 3, 19 J.D.

REGISTERED CERTIFICATE
No. 122



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Foundation