

REPORT ON MACHINERY.

No. 1237

Date of writing Report Jan. 15th 1920When handed in at Local Office March 9th 1920

Port of Halifax N.S.

Received at London Office JUL 13 1920

Survey held at New Glasgow N.S.

Date, First Survey July 2nd 1919Last Survey Dec. 30th 1919

Number of Visits 40

on the Steel screw steamer "Canadian Sealer"

E. C. Sears

Built at New Glasgow N.S.

By whom built Nova Scotia Steel & Coal Co. Ltd.

made at Amherst N.S.

By whom made Robt Engine Works

made at Amherst N.S.

By whom made Nova Scotia Steel & Coal Co. Ltd.

red Horse Power

Owners Canadian Government Merchant Marine Port belonging to Montreal

Horse Power as per Section 28 166

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

NES, &c.—Description of Engines

Inverted, direct-acting, triple expansion

No. of Cylinders 3

No. of Cranks 3

Cylinders 17 1/2, 28 3/4, 44 7/8

Length of Stroke 33

Revs. per minute 80

Dia. of Screw shaft as per rule 9 3/8

Material of screw shaft as fitted 10 1/4

Material of Steel

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

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

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

If two

are fitted, is the shaft lapped, or protected between the liners

Length of stern bush 41

Tunnel shaft as per rule 8 15/16

Dia. of Crank shaft journals as per rule 9 1/32

Dia. of Crank pin 9 3/8

Size of Crank webs 6 x 17

Dia. of thrust shaft under

9 3/8

Dia. of screw 12-14

Pitch of Screw min. 12-6: max. 13-5

No. of Blades 4

State whether moveable no

Total surface 51.75

Feed pumps 2

Diameter of ditto 23/4

Stroke 18

Can one be overhauled while the other is at work yes

Bilge pumps 2

Diameter of ditto 3

Stroke 18

Can one be overhauled while the other is at work yes

Donkey Engines 1

Sizes of Pumps 12 x 10 1/2 x 21

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

Engine Room fire - 2 1/2 diam.

In Holds, &c. fire - 2 1/2 diam. and one - 2 1/2 diam.

connected to tunnel well

Bilge Injections 1

sizes 6

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size yes, 2 1/2 diam.

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

connections with the sea direct on the skin of the ship yes

Are they Valves or Cocks valves

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 lead line

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

pipes are carried through the bunkers Wash-deck, service & soil pipes

How are they protected Steel plates

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

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

Screw Shaft Tunnel watertight yes

Is it fitted with a watertight door yes

worked from Steering engine platform

LERS, &c.—(Letter for record 2900)

Manufacturers of Steel Luker Steel Co. Boatsville, Pa.

Heating Surface of Boilers 2700

Is Forced Draft fitted no

No. and Description of Boilers Scotch multitubular

Working Pressure 185 lbs per sq. in.

Tested by hydraulic pressure to 370 lbs per sq. in.

Date of test Nov. 12/19

No. of Certificate 142

each boiler be worked separately yes

Area of fire grate in each boiler 42

No. and Description of Safety Valves 10

boiler 2 spring loaded

Area of each valve 706

Pressure to which they are adjusted 185 lbs per sq. in.

Are they fitted with easing gear yes

least distance between boilers or uptakes and bunkers or woodwork 12

Mean dia. of boilers 12-9

Length 10-9

Material of shell plates Steel

thickness 13/16

Range of tensile strength 28-32

Are the shell plates welded or flanged no

Descrip. of riveting: cir. seams D.R. lap joints

seams T.R. Double strap

Diameter of rivet holes in long. seams 1 1/4

Pitch of rivets 8 3/4

Lap of plates or width of butt straps 19 1/4

Percentage of strength of longitudinal joint rivets 87.5

percentage of strength of longitudinal joint plate 85

Working pressure of shell by rules 208

Size of manhole in shell 12 x 16

Material of compensating ring 30 x 36

No. and Description of Furnaces in each boiler 2 Corrugated

Material Steel

Outside diameter 48 5/8

Thickness of plates crown 3/8

Length of plain part top

Thickness of plates bottom

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules 206

Combustion chamber plates: Material Steel

Thickness: Sides 9/16

Back 9/16

Top 9/16

Bottom 1

Number of stays to ditto: Sides 6 x 9

Back 7 1/6 x 8

Top 7 1/2 x 7 1/2

If stays are fitted with nuts or riveted heads notted inside

Working pressure by rules 193

Material of stays Steel

Area at smallest part 1.29

Area supported by each stay 56.48

Working pressure by rules 240

End plates in steam space: Material Steel

Thickness 13/16

Pitch of stays 14 x 15

How are stays secured + notted

Working pressure by rules 208

Material of stays Steel

Area at smallest part 3.98

Area supported by each stay 210

Working pressure by rules 197

Material of Front plates at bottom Steel

Thickness 7/8

Material of Lower back plate Steel

Thickness 13/16

Greatest pitch of stays 13 1/4

Working pressure of plate by rules 260

Diameter of tubes 3

Pitch of tubes 4 x 4 5/8

Material of tube plates Steel

Thickness: Front 7/8

Back 7/8

Mean pitch of stays 8.6

ch across wide water spaces 14 1/2

Working pressures by rules 240

Girders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 9 x 1 1/2

Length as per rule 33

Distance apart 7 1/2

Number and pitch of stays in each 3 - 7 1/2

Working pressure by rules 250

Steam dome: description of joint to shell

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Working pressure of shell by rules

Crown plates

Thickness

How stayed

Type

Date of Approval of Plan

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

Pressure to which each is adjusted

Is Easing Gear fitted

Type

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IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 bon. rod bolts & nuts: 2 piston rod to bend bolts & nuts: 2 main-bearing bolts
15 coupling bolts: 1 set of feed & bilge pump valves: 1 set of piston springs: 5 doz. ass.
bolts & nuts: iron of various sizes: propeller and propeller-shaft: 1 doz. junk rim
set of check valves: 6 cylinder cover bolts: 15 boiler tubes: 24 condenser tubes: 50
1 set of safety valve springs:

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building	{	During progress of work in shops - -	July 2, 14, 18, 22, 28, 31: Aug. 8: Sept. 6, 13, 20, 23, 29, 30. Oct. 1, 7, 11, 15 & 17 th
		During erection on board vessel - - -	Oct. 24, 25, 30. Nov. 3, 5, 7, 10, 19, 20, 26. Dec. 2, 3, 8, 12, 13, 17, 18, 24, 26, 28, 31
		Total No. of visits	40.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts	Cylinders	Aug. 8, Sept. 20, Slides	Aug. 14.	Covers	Aug. 8.	Pistons	Sept. 6.	Rods	Aug. 14.
Connecting rods	July 2.	Crank shaft	Aug. 22.	Thrust shaft	Aug. 22.	Tunnel shafts	Nov. 5, 19	Screw shaft	June 13.
Stern tube	July 23 & 25	Steam pipes tested	Sept. 3 rd	Engine and boiler seatings	July 2.	Engines holding down bolts	Oct. 5	Propeller	Sept. 10
Completion of pumping arrangements	Dec. 29 th	Boilers fixed	Dec. 14 th	Engines tried under steam	DOCK-trial				
Completion of fitting sea connections	Sept. 24 th	Stern tube	Sept. 22.	Screw shaft and propeller	Sept. 30.				
Main boiler safety valves adjusted	Dec. 29.	Thickness of adjusting washers	See App. 13/16 for 13/16: Std. App. 1/16						
Material of Crank shaft	Steel	Identification Mark on Do.	3.5.19	Material of Thrust shaft	Steel	Identification Mark on Do.			
Material of Tunnel shafts	Steel	Identification Marks on Do.	753	Material of Screw shafts	Steel	Identification Marks on Do.			
Material of Steam Pipes	Steel		16.6.19	Test pressure	555 lbs. (hydrostatic)				

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

If so, state name of vessel

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

The machinery for this vessel has been built under special survey, in accordance with Lloyd's rules and approved plans: the qualities of material and workmanship being satisfactory, and is, in my opinion, eligible to be classed  L.M.C.

It is submitted that this vessel is eligible for THE RECORD.

T.L.M.C. 12.19.

15/4/20.

JWD

ARR

The amount of Entry Fee	... £ 10 : 00 :	When applied for,	18/21 1920
Special	... £ 124 : 50 :	When received,	25/3/20
Donkey Boiler Fee	... £ :		
Travelling Expenses (if any)	£ 64 : 21 :		

TUE. APR 20 1920

Committee's Minute

Assigned

+ L.M.C. 12.19

CERTIFICATE WRITTEN.

Engineer Surveyor to Lloyd's Register of Ships

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