

REPORT ON MACHINERY.

No. 1237

Received at London Office FEB 13 1920

Date of writing Report Jan. 15th 1920. When handed in at Local Office March 9th 1920 Port of Halifax N.S.
Survey held at New Glasgow N.S. Date, First Survey July 2nd 1919 Last Survey Dec. 31st 1919

on the Steel screw steamer "Canadian Sealer" Number of Visits 40
E. C. Sears Built at New Glasgow N.S. By whom built Nova Scotia Steel & Coal Co. Ltd. When built 1919
made at Amherst, N.S. By whom made Robt Engine Works when made 1919
made at partly at New Glasgow N.S. By whom made Nova Scotia Steel & Coal Co. Ltd. when made 1919

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 Steel
as fitted 10 1/4 screw shaft

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 yes 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
as fitted 9 3/8 Dia. of screw 12-14 Pitch of Screw min. 12-6 max. 13-5 No. of Blades 4 State whether moenable no Total surface 51.75
Feed pumps 2 Diameter of ditto 2 3/4 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
In Holds, &c. five - 2 1/2 diam. and one - 2 1/2 diam.
Engine Room five - 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 yes
connections with the sea direct on the skin of the ship yes Are they Valves or Cocks valves.

key 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.

ERS, &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 Two single ended Scotch multitubular.
Working Pressure 185 lbs per sq. in. Tested by hydraulic pressure to 370 lbs per sq. in. Date of test No. 2-11/12/19 No. of Certificate 142.

each boiler be worked separately yes Area of fire grate in each boiler 42 No. and Description of Safety Valves to
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 1 3/16 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
percentages of strength of longitudinal joint rivets 87.5 Working pressure of shell by rules 208 Size of manhole in shell 12 x 16
of compensating ring 30 x 36 No. and Description of Furnaces in each boiler 2 Corrugated Material Steel Outside diameter 48 5/8

length of plain part top Thickness of plates crown 2 7/8 Description of longitudinal joint No. of strengthening rings
bottom 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

each 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 % 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

UPERHEATER. 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

006435-006446-0057

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 Con. rod bolts & nuts: 2 piston rod to end 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 run
 set of check valves: 6 cylinder cover bolts: 15 boiler tubes: 24 Condenser tubes: 50
 1 set of safety valve spring:

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, 30
		Total No. of visits	40.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts	Cylinders July 2, 22, 23, 31 st	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 10
Completion of pumping arrangements	Dec. 29 th	Boilers fixed Dec. 14 th	Engines tried under steam Dec. 14 th	Shop trials & 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	Sub. Aff. 13/16 for 13/16: Subd. Aff. 1/16		
Material of Crank shaft	Steel	Identification Mark on Do. 3.5.19	Material of Thrust shaft	Steel	Identification Mark on Do. 2
Material of Tunnel shafts	Steel	Identification Marks on Do. 755	Material of Screw shafts	Steel	Identification Marks on Do. 2
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.**

JWD 15/4/20. ARS

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

Engineer Surveyor to Lloyd's Register of Ships

Committee's Minute
 Assigned + L.M.C. 12.19

