

Rpt. 4.

REPORT ON MACHINERY.

No. 21

Port of Cleveland, O.

Received at London Office TUE MAY 11 1913

No. in Survey held at Cleveland, O.

Date, first Survey July 6

Last Survey Nov 1912

Reg. Book. Keels not yet named. Land No. 6

(Number of Visits 2)

Master ✓

Built at Port Arthur, Ont. By whom built Western Dry Dock & Shipbuilding Co.

Gross Tons

Net Tons

Engines made at Cleveland

By whom made American Shipbuilding Co. when made 1912

Boilers made at Port Arthur, Ont.

By whom made Western Dry Dock & S.B. Co. when made ✓

Registered Horse Power ✓

Owners Northern Navigation Co. Port belonging to ✓

Nom. Horse Power as per Section 28 205

Is Refrigerating Machinery fitted for cargo purposes no

Is Electric Light fitted yes

ENGINES, &c.

Description of Engines Triple expansion

No. of Cylinders 4

No. of Cranks 4

Dia. of Cylinders 29 1/2 - 47 1/2 - 58 - 58

Length of Stroke 42"

Revs. per minute 120

Dia. of Screw shaft 15.73"

as per rule 15.73"

Material of screw shaft steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liners Is the after end of the liner made water tight in 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 5'-4"

Dia. of Tunnel shaft 14"

as per rule 14"

Dia. of Crank shaft journals 14 3/4"

as per rule 14 3/4"

Dia. of Crank pin 14 3/4"

Size of Crank webs 14 3/4"

Dia. of thrust shaft under collars 14 3/4"

Dia. of screw 16'-6"

Pitch of Screw 17'-0"

No. of Feed pumps 2 independent

Diameter of ditto 12 1/8"

Stroke 24"

Can one be overhauled while the other is at work yes

No. of Bilge pumps 1

Diameter of ditto 5"

Stroke 13 1/2"

Can one be overhauled while the other is at work ✓

No. of Donkey Engines 8

Sizes of Pumps See book

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

In Engine Room Bilge pump 1-3 1/2 2-3", Ballast pumps 2-6"

In Holds, &c. Steam ejectors will be fitted

No. of Bilge Injections ✓ sizes ✓

Connected to condenser, or to circulating pump ✓

Is a separate Donkey Suction fitted in Engine room & size all other suction

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 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 ✓

Total Heating Surface of Boilers 13128

Is Forced Draft fitted yes

No. and Description of Boilers 4 main launching, Scotch type

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 ✓

Size of compensating ring ✓

No. and Description of Furnaces in each boiler ✓

Material ✓

Outside diameter ✓

Length of plain part ✓

Thickness of plates ✓

Description of longitudinal joint ✓

No. of strengthening rings ✓

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 ✓

Diameter 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 ✓

Diameter 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 ✓

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 ✓

BOILERS TO BE BUILT AT PORT ARTHUR

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description		When made	Where fixed
Made at	By whom made			
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area
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
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,

The American Ship Bldg Co. Manufacturer.

Dates of Survey while building	During progress of work in shops - -	July 6, 13	Sept 3, 24	Oct 1, 24, 25	Nov 13
	During erection on board vessel - -				
Total No. of visits		8			

Dates of Examination of principal parts—Cylinders	Sept 24	Slides	Sept 24	Covers	Sept 24	Pistons	Sept 24	Rods	Oct 24
Connecting rods	Oct 24	Crank shaft	Sept 24	Thrust shaft	Oct 24	Tunnel shafts		Screw shaft	Sept 23
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	Steel	Identification Mark on Do.	F90	Material of Thrust shaft	Steel	Identification Mark on Do.	F90		
Material of Tunnel shafts		Identification Marks on Do.		Material of Screw shafts	Steel	Identification Marks on Do.	F90		
Material of Steam Pipes		Test pressure							

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

These engines have been built under Special Survey in accordance with the Rules & approved plans. The workmanship & material are good & the engines will be eligible, in my opinion, to receive the notation + L.M.C (with date) when fitted aboard the vessel to the satisfaction of the Surveyor at Port Arthur.

List & size of Donkey Engines that will be fitted on board

Fire & Aux. Feed pump 12x6x12, 2 Ballant pumps, 12x16x18, Mates pump 6x4x6, Cold water pump, Hot water pump, Fresh water pump all 5 1/2 x 5 x 6, Sanitary 7 1/2 x 8 1/2 x 10.

The amount of Entry Fee	£	1/2 of Special Survey Fee (\$100) to be credited to Cleveland office	When applied for.
Special	£		
Donkey Boiler Fee	£		When received.
Travelling Expenses (if any) £			

John S. Heck.

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI. MAY. 15. 1914 TUE. MAY. 19. 1914

Assigned

Port Arthur on completion

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

These particulars

Signal Letters (if any)

Official Number

134,014.

No., Date, and Port

Whether British or Foreign Built.

British

Number of Decks

Number of Masts

Rigged

Stern

Build

Galleries

Head

Framework and vessel

Number of Bulkheads

Number of water tanks and their capacity

Total to quarter the deck to bottom of keel

No. of sets of Engines.

One 4 Crank Condenser

No. of Shafts.

One

Description.

Number

Iron or Steel

Loaded Pressure

Under Tonnage

Space or spaces

Turret or Trunk

Forecastle

Bridge space

Poop or Break

Side Houses

Deck Houses

Chart House &

Spaces for machinery

Section 78 (2)

1894

Excess of Hatch

Gross Tonnage

Deductions, as per

Register

NOTE 1.—The tonnage

propeller

NOTE 2.—The tonnage

propeller

Name of Vessel

No. of Owners

Name, Residence

Dated

826. W. 11700/30

