

REPORT ON MACHINERY.

No. 4634

TUES. FEB 19 1907

Port of

Grimsby.

Received at London Office

19

No. in Survey held at

Grimsby.

Date, first Survey

15 September 06

Last Survey

Feb 1907.

1907.

Reg. Book.

18 in the

Engines (No. 39) for the S.T. MORA NIVEN.

Master

McAlister.

Built at

Selby.

By whom built

Cochran & Sons (No. 39)

Tons

Gross 166.

Net

57.

When built

1906/7.

Engines made at

Grimsby.

By whom made

G. Central Co-op Exch. Co. Ltd.

when made

1907.

Boiler made at

Stockton

By whom made

Riley Bros. Ltd.

when made

1906.

Registered Horse Power

Owners

The Napier Fish Supply Co.

Port belonging to

Napier, N.Z.

Nom. Horse Power as per Section 28

42.50

Is Refrigerating Machinery fitted for cargo purposes

Yes.

Is Electric Light fitted

No.

ENGINES, &c.—Description of Engines

Trip sep. surface cond.

No. of Cylinders

3

No. of Cranks

3.

Dia. of Cylinders

10 1/4. 15 3/4. 26 1/4

Length of Stroke

20.

Revs. per minute

110.

Dia. of Screw shaft

as per rule 6 1/4.

Material of screw shaft

Exp. iron.

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

in the 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

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

Yes.

If two

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

Length of stern bush

2' 3"

Dia. of Tunnel shaft

as per rule 4.05

Dia. of Crank shaft journals

as per rule 5 1/4

Dia. of Crank pin

5 1/2

Size of Crank webs

6 1/2 x 3 3/8

Dia. of thrust shaft under

collars

5 1/4

Dia. of screw

7-9

Pitch of Screw

9-0

No. of Blades

4

State whether moveable

No.

Total surface

20 1/2

No. of Feed pumps

1

Diameter of ditto

2

Stroke

10

Can one be overhauled while the other is at work

No. of Bilge pumps

1

Diameter of ditto

3

Stroke

10

Can one be overhauled while the other is at work

No. of Donkey Engines

1

Sizes of Pumps

6 x 1 1/2 x 6 1/2

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

In Engine Room

Sea bilge & hotwell

2" bore.

In Holds, &c.

Fish hold and Fresh water tanks

No. of Bilge Injections

1

sizes

2 1/2

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

6" & 2 1/2" bore.

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

None

Are all connections with the sea direct on the skin of the ship

Yes.

Are they Valves or Cocks

Both.

Are 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

above.

Are 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.

What pipes are carried through the bunkers

Fish room & Fresh water suction

are they protected

Strong wood casing.

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

Yes.

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

Yes.

Dates of examination of completion of fitting of Sea Connections

15/11/06.

of Stern Tube

15/11/06

Screw shaft and Propeller

15/11/06.

Is the Screw Shaft Tunnel watertight

None.

Is it fitted with a watertight door

Yes.

worked from

BOILERS, &c.—(Letter for record.)

Manufacturers of Steel

Total Heating Surface of Boilers

18000

Is Forced Draft fitted

No. and Description of Boilers

Working Pressure

180 lbs

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 grate

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bulkheads 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

plate

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

top

Thickness of plates

crown

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by 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

End plates in steam space:

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of stays

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of Front plates at bottom

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Working pressure of plate by rules

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

W1541-0211

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description	Made at	By whom made	When made	Where fixed
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
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	Rivets Plates
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:—Screw shaft, propeller, main and auxiliary feed check valves, feed circulating air and bilge pump valves, nee sec. chain and stop, one set coupling bolts, 2 top end bolts 2 bottom end bolts 2 main bearing bolts, boiler and condenser tubes, bolts and nuts

The foregoing is a correct description,

Manufacturer.

For the GREAT CENTRAL CO-OPERATIVE
ENGINEERING & SHIP REPAIRING COMPANY, LTD.

Fred Lister

Dates of Survey while building
During progress of work in shops - 1906:— Sep. 15, 20, Oct 8, 29, 27, 31, Nov 9, 8, 13, 21, 23, 27, Dec 6, 1907:— Jan 1, 4, 8, 10, 14, 24, 28, 29, Feb 1, 5
Total No. of visits Twenty-Four (24) Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 20/10/06, 8/1/06. Slides 8/1/06, 6/12/06. Pistons 8/1/06. Rods 8/1/06. Connecting rods 8/1/06. Crank shaft 22/11/06. Thrust shaft 27/11/06. Tunnel shafts 27/11/06. Screw shaft 27/11/06, 1/11/06. Propeller 1/11/06. Stern tube 20/10/06. Steam pipes tested 14/11/07. Engine and boiler seatings 20/11/06. Engines holding down bolts 14/11/07. Completion of pumping arrangements 8/1/07. Boilers fixed 8/1/07. Engines tried under steam 29/1/07. Main boiler safety valves adjusted 29/1/07. Thickness of adjusting washers 7/4. Material of Crank shaft, 8 mus Steel Identification Mark on Do. 503. Material of Thrust shaft Sp don Identification Mark on Do. No 505. Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Sp don Identification Marks on Do. No 102. Material of Steam Pipes Copper Solid drawn Test pressure 360 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.) These engines have been constructed under special survey; the materials and workmanship are good and the case is eligible in my opinion for the notation + L.M.C. 2.07.

It is submitted that
this vessel is eligible for
THE RECORD H.L.M.C. 2.07

19.2.07

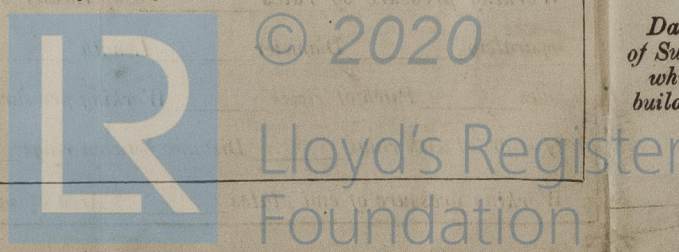
19.2.07

The amount of Entry Fee, £ 1 : 0 : 0 When applied for.
Special ... £ 8 : 0 : 0 8/1/07
Donkey Boiler Fee ... £ 9 : 0 : 0 When received, 28/1/07
Travelling Expenses (if any) £ 3 : 0 : 0
Shaped at M.L. 13-0-0
Committee's Minute 6 : 0 : 0

Assigned + L.M.C. 2.07
FRI. FEB 22 1907

D. Ritchie.

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



MACHINERY CERTIFICATE
WRITTEN.

This office.

Certificate (if required) to be sent to

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

No. in Reg. Book. 28 Sep on Master Engines made Boilers made Registered H MULTIT (Letter for r Boilers On No. of Certi safety valves Are they fitte Smallest dis Material of Descrip. of Lap of plat rules 18 boiler 2 Description plates: Ma Top 8x8 smallest pa Pitch of st Area supp Lower bac Pitch of tu water spac girder at Working p separately holes If stiffene Working VERTI Made at tested by No. of sa enter the strength Lap of p Radius of Thickness plates Thickness Dates of Survey while building