

## REPORT ON MACHINERY.

No. 74087

Date of writing Report

19

When handed in at Local Office

19

Port of

Received at London Office

TUE. 2 FEB. 1921

No. in Survey held at  
Reg. Book.

70621 on the

South Shields

S. S. INSTON

Date, First Survey 11<sup>th</sup> Aug 1920Last Survey 28<sup>th</sup> Jan 1921

(Number of Visits 8)

Gross 1834

Net 1054

Master

Built at

S. Shields

By whom built

C. Renoldson &amp; Co (Ld) (No. 185)

Tons

When built

1920

Engines made at

Sunderland

By whom made

Mac Coll &amp; Pollock Ltd.

when made

1920

Boilers made at

do.

By whom made

do

when made

1920

Registered Horse Power

Owners

S. Inston &amp; Co

Port belonging to

London

Nom. Horse Power as per Section 28

235

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes

## ENGINES, &amp;c.—Description of Engines

See Sunderland Report No. 7746

No. of Cylinders

No. of Cranks

Dia. of Cylinders

Length of Stroke

Revs. per minute

Dia. of Screw shaft as per rule

Material of

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

as fitted screw shaft

in the propeller boss

If the liner is in more than one length are the joints burned

Is the after end of the liner made water tight

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

If the liner does not fit tightly at the part

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

If two

Dia. of Tunnel shaft as per rule

Dia. of Crank shaft journals as per rule

Dia. of Crank pin

Size of Crank webs

Length of stern bush

as fitted

as fitted

collars

Dia. of screw

Pitch of Screw

No. of Blades

State whether moveable

Total surface

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Donkey Engines

Sizes of Pumps

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

In Engine Room

No. of Bilge Injections

sizes

Connected to condenser, or to circulating pump

In Holds, &amp;c. No. 1 Hold 2-2 1/2" (P+S); No. 2 Hold 2-2 1/2" (P+S); No. 3 Hold 2-2 1/2" (P+S); No. 4 Hold 1-2 1/2" Tunnel Well 1-2 1/4"

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Is a separate Donkey Suction fitted in Engine room &amp; size

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 the Discharge Pipes above or below the deep water line

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

Bilge &amp; Tank Suctions &amp; form? Compensating

How are they protected

Hood-cases

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

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

## BOILERS, &amp;c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

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

top

Thickness of plates

crown

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

Area 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

Area 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

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

## 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



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— One set of Coupling Bolts. Two Main Bearing Bolts. Two Top end Bolts - One Bottom End Bearing Complete - One Air Pump Rod. 1 set each of 3rd, 2nd, 1st, P. Piston Rings - Deck pump valves - Bilge pump valves - main donkey check valves - air Ballast pump valves - Top end, Bottom end & main Bearings with bolts for centrifugal pumps One Safety Valve Spring One Sail shaft and One propeller.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1920  
During erection on board vessel - - - Aug. 11. Oct. 25. Nov. 15. 29. Dec. 16 1921  
Total No. of visits 8 Jan 17. 21. 28.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders Slides Covers Pistons Rods  
Connecting rods Crank shaft Thrust shaft Tunnel shafts Screw shaft Propeller  
Stern tube Steam pipes tested Engine and boiler seatings August 11-1920 Engines holding down bolts  
Completion of pumping arrangements January 17-1921 Boilers fixed Engines tried under steam  
Completion of fitting sea connections August 11-1920 Stern tube Aug. 11-1920 Screw shaft and propeller  
Main boiler safety valves adjusted Thickness of adjusting washers  
Material of Crank shaft Identification Mark on Do. Material of Thrust shaft Identification Mark on Do.  
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.  
Material of Steam Pipes Test pressure

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.)

This machinery has now been completed by the satisfactory installation of the pumping connections & examination of the spare gear on board as above.  
The vessel is eligible, in my opinion, for record + L.M.C. 1.21

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 1.21.

Recd  
9/2/21

The amount of Entry Fee ... £ : : When applied for,  
Special ... £ : : 19  
Donkey Boiler Fee ... £ : : When received,  
Travelling Expenses (if any) £ : : 19

Committee's Minute

Assigned

FRI. 11 FEB. 1921

+ L.M.C. 1.21

CERTIFICATE WRITTEN.



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