

REPORT ON MACHINERY.

No. 42764

Received at London Office

WED. MAY. 30 1923

Date of writing Report 24/5/23

When handed in at Local Office 28.5.23

Port of Glasgow

No. in Survey held at Glasgow

Date, First Survey 28th Feb 1923 Last Survey 22nd May 1923

Reg. Book.

62930 on the T/S 'INVERCORRIE'

(Number of Visits 28)

Master

Built at W. Hanlepool By whom built W. Gray & Co Ltd.

Tons Gross 1141

Net

When built 1918-5

Engines made at Glasgow

By whom made Messrs. Kin & Barclay N°: 1095-6 when made 1923.

Boilers made at Glasgow

By whom made Dr W. Henderson N°: 841 when made 1923

Registered Horse Power

Owners A. Weir & Co

Port belonging to London

Nom. Horse Power as per Section 28 82

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Twin Screw Triple

No. of Cylinders 3 each Eng No. of Cranks 3 each Eng

Dia. of Cylinders 9"-15"-25"

Length of Stroke 18"

Revs. per minute 150

Dia. of Screw shaft

as per rule 4.975

Material of

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

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 2-6 1/2"

Dia. of Tunnel shaft as per rule 4.65

Dia. of Crank shaft journals as per rule 4.83

Dia. of Crank pin 5"

Size of Crank webs 9 1/4 x 3 1/2"

Dia. of thrust shaft under

rollers 5

Dia. of screw 7-6"

Pitch of Screw 7-7"

No. of Blades 3 EACH

State whether moveable SOLID Total surface 34 1/2"

To. of Feed pumps 1

Diameter of ditto 2"

Stroke 9"

Can one be overhauled while the other is at work

To. of Bilge pumps 1

Diameter of ditto 2"

Stroke 9"

Can one be overhauled while the other is at work

To. of Donkey Engines / FEED PUMPS

SIZES OF PUMPS 6" X 8 1/2" X 13" 8" X 7" X 18"

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

In Engine Room 4 @ 2 3/4" & 1 @ 3"

In Holds, &c. & originally fitted.

To. of Bilge Injections 2 sizes 3 1/2" & 4"

Connected to condenser, or to circulating pump

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 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

That 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

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

BOILERS, &c.—(Letter for record 5)

Manufacturers of Steel Messrs D. Colville & Son Ltd.

Total Heating Surface of Boilers 1603.3

Is Forced Draft fitted No

No. and Description of Boilers Two return tube single ended

Working Pressure 180 LBS/SQ

Tested by hydraulic pressure to 320 LBS/SQ

Date of test 17-4-23

No. of Certificate 16233

Can each boiler be worked separately

Area of fire grate in each boiler 30.25

No. and Description of Safety Valves to

on each boiler one double spring

Area of each valve 3.14

Pressure to which they are adjusted 180 LBS/SQ

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork 18"

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

Percentage of strength of longitudinal joint

Working pressure of shell by rules

Size of manhole in shell

Use 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

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

1200-415

IS A DONKEY BOILER FITTED? No

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:—

Two propellers, two connecting rods top & bottom end bolts, two main bearing bolts, two sets of coupling bolts for each size of coupling, one set of feed and bilge pump valves, assorted bolts & nuts.

The foregoing is a correct description,

Micke & Baxter

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1923 Feb 28 Mar 2, 6, 9, 14, 19, 23, 26 Apr 5, 10, 13, 17, 18, 19, 20, 27 May 1, 2, 4, 7, 9, 11, 14, 16, 17, 18, 19, 22
During erection on board vessel --
Total No. of visits 28

Is the approved plan of main boiler forwarded herewith ☒

Dates of Examination of principal parts—Cylinders 19-3-23 Slides 10-4-23 " donkey " 10-4-23 " " 10-4-23 Pistons 20-4-23 Rods 10-4-23

Connecting rods 10-4-23 Crank shaft 6-4-23 Thrust shaft 23-3-23 Tunnel shafts Screw shafts 19-4-23 Propellers 23-3-23

Stern tube EXISTING Steam pipes tested 4-5-23 9-5-23 Engine and boiler seatings 20-4-23 Engines holding down bolts 11-5-23

Completion of pumping arrangements 17/5/23 Boilers fixed 11-5-23 Engines tried under steam 22-5-23

Completion of fitting sea connections 20-4-23 Stern tube FASTENINGS 20-4-23 Screw shafts and propellers 20-4-23

Main boiler safety valves adjusted 180 lbs/sq. in Thickness of adjusting washers S.B. 5/16" P.S. 3/16"

Material of Crank shaft S Identification Mark on Do. 1095-6 Material of Thrust shaft S Identification Mark on Do. 1256 PH

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Identification Marks on Do.

Material of Steam Pipes S.D. COPPER Test pressure 360 lbs/sq. in

Is an installation fitted for burning oil fuel Yes Is the flash point of the oil to be used over 150°F. Yes

Have the requirements of Section 49 of the Rules been complied with Yes

Is this machinery duplicate of a previous case No If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c. These engines have been constructed

under Special Survey in accordance with the rules, the materials and workmanship are good.

The oil engines of this vessel have been removed. The above steam engine and boilers (Cls. Rpt. N° 42684) have now been fitted on board in an efficient manner. The vessel was placed in dry dock, both propeller shafts were drawn for examination and interchanged for new engines to run inboard. Wear down P.S. tube 1/32" bracket 3/64". All existing sea connections were opened up and examined; new boiler blow down cock and two new new discharge valves have been fitted. A full power trial was afterwards carried out and everything found satisfactory. It is now recommended that the vessel remain as classed and have record of * L.M.C. New engines and boilers fitted 5-23. Fitted for oil fuel 5-23 F.P. above 150°F. Propeller shafts examined 5-23 C.L., and that the vessel's name be now removed from the Special Reasons List.

The amount of Entry Fee £ : : When applied for,

Special 4-2 1/2 1/2 : 6 : 29.5-19

Donkey Boiler Fee £ : : When received

Travelling Expenses (if any) £ : : 24.7- paid 30/6/23

Committee's Minute

Assigned +L.M.C.

GLASGOW

29 MAY 1923

MACHINERY CERT.

WRITTEN:

4/6/23

+NE+B. 5.23.

Fitted for oil fuel 5.23 F.P. above 150°F



© 2019

Lloyd's Register Foundation