

REPORT ON MACHINERY.

No. 83287

Stull Rph No. 32207

Received at London Office

12. 7. 1920

Date of writing Report 10. 7. 1920 When handed in at Local Office

Port of Ipswich

Survey held at Gt Yarmouth
on the S.S. "INVERTYNE"

Date, First Survey 2 Dec 1919 Last Survey 29 June 1920

(Number of Visits)

Gross 259
Net 111
When built 1920.

Master Built at Hessele By whom built Henry Seave Ltd

Engines made at Gt. Yarmouth By whom made Crabtree & Co. Ltd No 546 when made 1920.

Boilers made at Lincoln By whom made Butcher & Hornsby & Co. when made 1920

Registered Horse Power Owners British Mexican Pet. Co. Port belonging to London.

Net Horse Power as per Section 28 40 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No.

Engines, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 9 1/2", 15", 24" Length of Stroke 18" Revs. per minute Dia. of Screw shaft 5 1/2" Material of screw shaft Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner Is the after end of the liner made water tight

Is 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

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

are fitted, is the shaft lapped or protected between the liners Length of stern bush 24 3/4"

Dia. of Crank shaft journals 5 1/2" Dia. of Crank pin 5 1/2" Size of Crank webs 7 1/2" x 3 1/2" Dia. of thrust shaft under

s 5 1/2" Dia. of screw 6'-4" Pitch of Screw 8'-0" No. of Blades 4 State whether moveable No Total surface 15 f

Feed pumps one Diameter of ditto 2 1/2" Stroke 8" Can one be overhauled while the other is at work

Bilge pumps one Diameter of ditto 2 1/2" Stroke 8" Can one be overhauled while the other is at work

Donkey Engines one Sizes of Pumps 6" x 4 1/2" x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Two 2" In Holds, &c. one 2" in cofferdam.

Bilge Injections 1 sizes 2 1/2" Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size one 2"

Are 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 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

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

Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

ERS, &c.—(Letter for record S) Manufacturers of Steel See separate report.

Heating Surface of Boilers 814 Is Forced Draft fitted No No. and Description of Boilers 15B

Working Pressure 180 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

Boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear

Minimum distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates

Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Stages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell

Compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

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

Are stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Area of stays Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

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

Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Working pressures by rules Girders to Chamber tops: Material Depth and

Length as per rule Distance apart Number and pitch of stays in each

Steam dome: description of joint to shell % of strength of joint

Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Working pressure of shell by rules Crown plates Thickness How stayed

HEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

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:-

Two top end, two bottom end, two main bearings
one set coupling bolts & nuts, one set air feed & valve pump valves
one main & one donkey check valve, one spare pump & gear for oil fuel
pump. A quantity of assorted bolts & nuts & iron of
various sizes.

The foregoing is a correct description,

J. A. Bhandelani.

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1919 Dec 21, 31 (1920) Jan 14 Mar 25 Apr 9 1921 May 6, 14 June 3, 23, 29
During erection on board vessel - Hull: 1920: - June 11, Jul 26, 30, Aug 16, Sep 6, 9, 11, 14, 30 Oct 4, 7, 8
Total No. of visits 13 + 12 = 25.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts - Cylinders 10-12-19 Slides 10-12-19 Covers 10-12-19 Pistons 10-12-19 Rods 10-12-19

Connecting rods 10-12-19 Crank shaft Thrust shaft INT Tunnel shafts 25-3-20 9-4-20 Screw shaft 25-3-20 9-4-20 Propeller 9-4-20 19-4-20

Stern tube 25-3-20 Steam pipes tested 30/7/20 Engine and boiler seatings 26/7/20 Engines holding down bolts 26/7/20

Completion of pumping arrangements 8/10/20 Boilers fixed 7/10/20 Engines tried under steam 8/10/20

Completion of fitting sea connections 11/6/20 Stern tube 11/6/20 Screw shaft and propeller 11/6/20

Main boiler safety valves adjusted 7/10/20 Thickness of adjusting washers 7 1/8" 5 1/8" + 5/16"

Material of Crank shaft Steel Identification Mark on Do. 3/53 WDM Material of Thrust shaft Identification Mark on Do.

Material of Tunnel shafts Steel Identification Marks on Do. 152 067 Material of Screw shafts Steel Identification Marks on Do. 152 067

Material of Steam Pipes Copper Test pressure 400 lbs

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.,

The Engine has been built under Special Survey, in accordance

with the approved plans and the Society's Rules. The materials and

workmanship are sound and good.

The engines & boiler have been satisfactorily fitted on board the vessel.

On completion they were examined while running full power trials

in the Harbour.

The machinery throughout is now in good & efficient condition

& eligible in my opinion to have the record B.L.M.C. 10-20 marked

in Red in the Society's Register Book, also fitted for oil fuel & P. above 150°F.

The requirements of Section 49 of the Rules has been fully

complied with.

It is submitted that

this vessel is eligible for

THE RECORD + LMC 10-20

FITTED FOR OIL FUEL 10-20 FP ABOVE 150°F

Installing for letter 20/7/20

The amount of Entry Fee ... £ 2-5-0

Special ... £ 4-10-0

Donkey Boiler Fee ... £

Travelling Expenses (if any) £ 2-2-0

When applied for, 28/7/1920

When received, 15/10/20

Robert Rae Harbottle

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUE. OCT. 26 1920

+ LMC 10.20

Fitted for oil fuel 10-20. F.P. above 150°F.



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