

REPORT ON MACHINERY.

No. 17953

Received at London Office

Date of writing Report 17 Jan 1922 When handed in at Local Office 28 Jan 1922 Port of Greenwich

1 FEB. 1922

No. in Survey held at Port Glasgow Date, First Survey 27 Dec 1920 Last Survey 26 Jan 1922
Reg. Book. on the Steel Steamer "Busel" (Number of Visits 62)

Master Built at Port Glasgow By whom built Jergum & Co Ltd Tons Gross 1539 Net 647 When built 1922

Engines made at Port Glasgow By whom made Jergum & Co Ltd when made 1922

Boilers made at Port Glasgow By whom made Clyde & Co Ltd when made 1922

Registered Horse Power Owners Cork Steamship Co. Ltd. Port belonging to London

Nom. Horse Power as per Section 28 273 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks Three

Dia. of Cylinders 20 1/4 - 34 - 57 Length of Stroke 19 Revs. per minute 84 Dia. of Screw shaft as per rule 11 1/2 as fitted 12 1/2 Material of screw shaft Steel

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 49 1/2

Dia. of Tunnel shaft as per rule 10 5/8 as fitted 10 9/8 Dia. of Crank shaft journals as per rule 11 07 as fitted 11 1/8 Dia. of Crank pin 11 1/8 Size of Crank webs 21 1/2 Dia. of thrust shaft under collars 11 1/8 Dia. of screw 14 1/2 Pitch of Screw 15 0 No. of Blades 4 State whether moveable No Total surface 77 1/4

No. of Feed pumps 2 Diameter of ditto 6 Stroke 15 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 20 Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 Sizes of Pumps 9 1/2 - 5 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Three 2 1/2 In Holds, &c. One 2 1/2

Circulating Pump Separate Engine

No. of Bilge Injections 6 Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2 1/2

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 Yes

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

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 How are they protected

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

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Port Glasgow

BOILERS, &c.—(Letter for record S) Manufacturers of Steel W. Beardmore & Co

Total Heating Surface of Boilers 3904 Is Forced Draft fitted Yes No. and Description of Boilers Two Single End

Working Pressure 185 lbs Tested by hydraulic pressure to 330 lbs Date of test 17-25/11/21 No. of Certificate 1591-1592

Can each boiler be worked separately Yes Area of fire grate in each boiler 52 1/2 sq ft No. and Description of Safety Valves to each boiler Two Spring Area of each valve 7 07 Pressure to which they are adjusted 190 lbs Are they fitted with easing gear Yes

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

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

002206-002214-0080

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The top end bolts. The bottom end bolts. The main bearing bolts. One set coupling bolts. One set dead pump valves. One set bridge pump valves. Both ends.

The foregoing is a correct description,

FERGUSON BROTHERS (Port-Glasgow) LTD.

J. Ferguson

DIRECTOR.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1920 Dec. 27-31 1921 Jan. 28 Feb. 17-24 Mar. 1-11 15-18 Apr. 12-21 27 May 26 Jun. 1-2 13-20 23-29 July 13-20 26 Aug. 10-15 22 }
{ During erection on board vessel - - - 24-30 Sept. 1-7 12-14 21-22 26-29 Oct. 3-10 13-19 20-26 31 Nov. 8-14 17-22 25-29 Dec. 6-8 9-10 13-16 21-26 28-30 1922 Jan. 11-18 26 }
Total No. of visits 62.

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 2/6/21 Slides 2/6/21 Covers 1/6/21 Pistons 2/6/21 Rods 26/7/21
Connecting rods 26/7/21 Crank shaft 21/9/21 Thrust shaft 21/9/21 Tunnel shafts 13/10/21 Screw shaft 13/10/21 Propeller 2/9/21
Stern tube 3/10/21 Steam pipes tested 9/12/21 Engine and boiler seatings 20/10/21 Engines holding down bolts 14/11/21
Completion of pumping arrangements 14/11/21 Boilers fixed 9/12/21 Engines tried under steam 26/1/22
Completion of fitting sea connections 10/10/21 Stern tube 10/10/21 Screw shaft and propeller 20/10/21
Main boiler safety valves adjusted 21/12/21 Thickness of adjusting washers Part 23/64 S 9/32. 21/32 S 9/32.
Material of Crank shaft Steel Identification Mark on Do. 629 Material of Thrust shaft Steel Identification Mark on Do. 629
Material of Tunnel shafts Steel Identification Marks on Do. 629 Material of Screw shafts Steel Identification Marks on Do. 629
Material of Steam Pipes Copper Test pressure 465A.

Is an installation fitted for burning oil fuel

Yes

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. Workmanship good.

The Machinery and Boilers of this Steamer have been constructed under special survey and placed on board in accordance with the Society's Rules. They are now in my opinion in safe working condition and the case is respectfully submitted for the Intimation F. D. and + LANC 1-22 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD.

F. L. M. C. - 1.22.

F. D. C. L.

MACHINERY CERT. WRITTEN 9.2.22 (dated 1.2.22)

2.2.22

The amount of Entry Fee ... £ 4 : 0 :
Special ... £ 39 : 11 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 26/1/1922
When received, 7.2.22

James Jones

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW

31 JAN 1922

Assigned + L. M. C.

1.22. F. D.



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