

REPORT ON MACHINERY.

No. 27905

Received at London Office

Date of writing Report 19 When handed in at Local Office 21 AUG 1920 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 3 Mar '20 Last Survey 14 August 1920

Reg. Book. on the new steel S/S "WILLIAM BLUMER".

Master H. Jensen Built at Sunderland By whom built J. Blumer & Co. L^d S/S N^o 244 When built 1920Engines made at Sunderland By whom made J. Dickinson & Sons L^d (N^o 835) when made 1920Boilers made at Sunderland By whom made J. Dickinson & Sons L^d (N^o 835) when made 1920

Horse Power 365 Owners H. Jensen Port belonging to Mandal

Horse Power as per Section 28 365 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

INES, & Co.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

Diameter of Cylinders 25.42.68 Length of Stroke 45 Revs. per minute 68 Dia. of Screw shaft as per rule 14.33 Material of Work done as fitted 14.33 screw shaft

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

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

in 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 5.0

Diameter of Tunnel shaft as per rule 12.9 Dia. of Crank shaft journals as per rule 13.54 Dia. of Crank pin 13.34 Size of Crank webs 25x8.2 Dia. of thrust shaft under as fitted 13.34

Diameter of screw 11.3 Pitch of Screw 18.0 No. of Blades 4 State whether moveable no Total surface 930 ft

Feed pumps 2 Diameter of ditto 7.2 Stroke 18 Can one be overhauled while the other is at work yes (Weir's steam cylinder 9")

Bilge pumps 2 Diameter of ditto 4.5 Stroke 22.5 Can one be overhauled while the other is at work yes

Donkey Engines 2 Sizes of Pumps 9x9x10, 7.5x5x6 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 4 @ 3.5 In Holds, &c. N^o 1 hold - 2 @ 3.5 N^o 2 hold - 2 @ 3.53 hold - 2 @ 3.5 N^o 4 hold - 1 @ 3.5 Tunnel well - 1 @ 3.5

Bilge Injections 1 sizes 7 Connected to condenser, or to circulating pump B.P. Is a separate Donkey Suction fitted in Engine room & size yes 4"

Are 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

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

Are the pipes carried through the bunkers forward hold suction How are they protected under timber boards

Are the 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

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

ERS, & Co.—(Letter for record S) Manufacturers of Steel John Spencer & Sons L^d.

Heating Surface of Boilers 5751 sq ft Is Forced Draft fitted no No. and Description of Boilers Two single ended marine

Working Pressure 200 Tested by hydraulic pressure to 350 Date of test 22.6.20 No. of Certificate 3697

Can each boiler be worked separately yes Area of fire grate in each boiler 69.5 sq ft No. and Description of Safety Valves to

boiler two, dried spring Area of each valve 8.34 Pressure to which they are adjusted 205 Are they fitted with easing gear yes

Least distance between boilers or uptakes and bunkers or woodwork 18" ext Mean dia. of boilers 17.0 Length 11.6 Material of shell plates steel

Range of tensile strength 29-33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams WR

D.B.S.T.R Diameter of rivet holes in long. seams 1.5 Pitch of rivets 10 Lap of plates or width of butt straps 1.9 3/4

Efficiency of strength of longitudinal joint rivets 91.4 plate 85 Working pressure of shell by rules 203 Size of manhole in shell 16x12

Compensating ring flanged No. and Description of Furnaces in each boiler 3. Deighton Material steel Outside diameter 4.3

Top of plain part Thickness of plates crown 3.2 Description of longitudinal joint welded No. of strengthening rings —

Bottom of plain part Thickness of plates bottom 3.2

Pressure of furnace by the rules 210 Combustion chamber plates: Material steel Thickness: Sides 25/32 Back 25/32 Top 25/32 Bottom 25/32

Stays to ditto: Sides 10 1/4 x 9 1/2 Back 9 3/4 x 9 1/2 Top 10 x 9 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 200

Material of stays steel Area at smallest part 2.030 Area supported by each stay 890 Working pressure by rules 205 End plates in steam space:

Material of stays steel Thickness 1 1/2 Pitch of stays 20x14 How are stays secured D.N. & W Working pressure by rules 204 Material of stays steel

Area at smallest part 6.70 Area supported by each stay 340 Working pressure by rules 201 Material of Front plates at bottom steel

Material of Lower back plate steel Thickness 15/16 Greatest pitch of stays 13 3/4 x 9 3/4 Working pressure of plate by rules 212

Pitch of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates steel Thicknesses: Front 1 1/2 & 2 1/2 Back 7/8 Mean pitch of stays 11 1/4

Working pressures by rules 262 Girders to Chamber tops: Material steel Depth and

Distance apart 10 Number and pitch of stays in each 2 @ 9 1/2

Steam dome: description of joint to shell none % 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

002024-002037-0105

IS A DONKEY BOILER FITTED?

yes

If so, is a report now forwarded?

yes

SPARE GEAR.

State the articles supplied:—

Two connecting rod top and bottom end bolts and nuts
Two main bearing bolts. one set of coupling bolts. one set of feed and bilge pump
valves. iron and bolts of various size. one screw shaft and one propeller.

The foregoing is a correct description,

John Dickinson & Sons, Limited.

John Dickinson & Sons, Limited.

Manufacturer.

Dates of Survey while building

During progress of work in shops --
During erection on board vessel --
Total No. of visits

Director
1920 Mar 2 16 April 15 21 May 7 11 13 June 1 4 8 14 18 19 22 29 July 28 29 30 31 31
Aug 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
(29)

Is the approved plan of main boiler forwarded herewith

yes

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Dates of Examination of principal parts—Cylinders 8-6-20 Slides 30-6-20 Covers 18-6-20 Pistons 15-6-20 Rods 8-6-20
Connecting rods 29-6-20 Crank shaft 4-6-20 Thrust shaft 15-7-20 Tunnel shafts 15-7-20 Screw shaft 15-7-20 Propeller 4-8-20
Stern tube 9-7-20 Steam pipes tested 31-7-20 Engine and boiler seatings 14-7-20 Engines holding down bolts 29-7-20
Completion of pumping arrangements 13-8-20 Boilers fixed 26-7-20 Engines tried under steam 15-8-20
Completion of fitting sea connections 14-7-20 Stern tube 20-7-20 Screw shaft and propeller 4-8-20
Main boiler safety valves adjusted 5-8-20 Thickness of adjusting washers Port boiler $F\frac{7}{16}$ A $\frac{3}{32}$; after boiler $F\frac{1}{2}$ A $\frac{3}{32}$
Material of Crank shaft J. Steel Identification Mark on Do. LLOYDS No 835
Material of Tunnel shafts J. Steel Identification Marks on Do. L.C.D. Material of Screw shafts Sup. Iron Identification Marks on Do. L.C.D.
Material of Steam Pipes Solid drawn copper Test pressure 400 lbs per sq. in.

Is an installation fitted for burning oil fuel no

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 no

If so, state name of vessel —

General Remarks (State quality of workmanship, opinions as to class, &c.)

The materials and workmanship are good.

The machinery has been constructed under special survey and is eligible in my opinion for classification and the record + LMC 8.20.20

It is submitted that
this vessel is eligible for
THE RECORD + LMC. 8.20

Roll.
25/8/20. A.R.L.

The amount of Entry Fee ... £ 3 : : When applied for,
Special ... £ 38 : 15 : 21 Aug 1920
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : Aug 24 1920

L.C.D. Davis
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. AUG. 27 1920
Assigned + LMC 8.20

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Foundation